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The Journal of Teaching English for Specific and Academic Purposes
Vol. 10, No 1, 2022

Table of Contents

Articles

THE JOURNAL OF TEACHING ENGLISH FOR SPECIFIC AND ACADEMIC PURPOSES
Vol. 10, Nº 1, 2022, pp. 1–12

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Original scientific paper

EFFECTIVENESS OF COOPERATIVE LEARNING TECHNIQUES IN TEACHING COMMUNICATION SKILLS: ESP LEARNERS' PERSPECTIVE

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Abstract. *The present study aims to record the effectiveness of cooperative learning techniques in teaching English communication skills to* ***engineering students****. When communicating in English during various activities in and out of the class, engineering students are observed having various inhibitions which affect their performance. Cooperative learning is an instructional technique developed to increase academic achievement of students through social and interpersonal skills development. It is widely recognized as a pedagogical practice that promotes socialization and learning among students. One hundred first year Bachelor of Technology (B.Tech.) students from a private University in Maharashtra are the subjects of the present research. Two cooperative techniques viz. Role Play and Jigsaw were used to teach two units Communication Process and Report Writing. Students' performances were video recorded. The findings showed a remarkable development in the students' understanding and implementation of various terms in communication process. Moreover, selected students learnt how to write and present technical reports effectively. After the experiment, a questionnaire was developed and administered to the subjects to know their views on effectiveness of cooperative learning techniques. Present paper analyses and discusses the students' views on use of cooperative learning techniques.*

Key words: *cooperative learning, role play, jigsaw, ESP, communication skills*

1. INTRODUCTION

Teaching and learning of any language require communicative atmosphere in which students can interact and communicate frequently to enhance their language skills (Sharan, 2011; Neda, Radosavlevikj, 2020). Students' interaction with one another is equally important to teachers' interaction with students. Most of the teachers in India are trained to arrange interactions between students and teaching materials i.e., textbooks and curriculum programmes. Much of the training time is also spent on how teachers should interact with students. However, how students should converse with one another is hardly considered in Indian Education System, especially in engineering faculty. How skillfully teachers arrange conversations among students has very important role in learning. When

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teachers provide a platform where students can interact with one another, it not only helps students to understand the concepts but also to improve their self-confidence.

Unfortunately, due to overcrowded classrooms in professional faculties, like engineering, with around 70 students, it is very difficult for learners to enhance their language learning skills through interactions with one another. As a result, teachers prefer to use the traditional lecture method where teacher is the only person who thinks, suggests and talks. Students rarely get opportunity to say something. The existing exam patterns in India encourage students to consider one another as competitors and defeat one another by scoring more marks than other. Consequently, students fail to enhance friendly and constructive cooperation through which they not only can learn, teach, cooperate and enhance one another's knowledge, but they also can develop their communicative, social-interpersonal skills (Du, 2012). If the students are given opportunities to communicate with each other by using some cooperative learning strategies, they will be able to overcome most of their inhibitions in communication such as anxiety, shyness, hesitations, etc.

To overcome this situation, language teacher needs to use an innovative language learning approach that encourages students to consider each other as a learning resource rather than competing. Cooperative learning (CL) is a better solution to fill this gap. Johnson and Johnson (1999) advocate that for better and effective learning of language that enhances student cognitive and interpersonal communicative skills the classroom set-up needs to be replaced with the one which promotes cooperation, communication and interaction among students. Although cooperative learning is not specifically designed for language learning, it has frequently been used and researched in language class.

2. Literature Review

Cooperative learning is a teaching strategy that requires small groups of students to work interdependently on learning activities in order to achieve and receive group rewards or recognition (Slavin, 1980). Cooperative learning basic premise is that students construct knowledge through interaction with other students (Johnson et al., 1991). In such cases, students work together to solve one another's doubts that they may not ask to instructors. The critical element of cooperative learning is that students must work together to achieve common interdependent goals (Johnson et al., 1991).

Research carried out on the effectiveness of the use of CL in ESL/EFL contexts has shown that CL is very effective in developing positive attitudes towards learning and towards other learners (Gunderson & Johnson, 1980), enhancing intrinsic motivation (Clement, Dornyei, & Noels, 1994; Szostek, 1994; Ushioda, 1996), and creating solidarity among team members through their working together to achieve group goals (Nichols & Miller, 1994). Research has also shown that CL decreases levels of anxiety and increases self-confidence (Deci & Ryan, 1985), increases social backing for academic achievement (Daniels, 1994), and increases the level of expectancy of completing academic tasks successfully (Douglas, 1983).

Furthermore, in a more recent study, Ghaith and Abd El-Malak (2004) reported that the use of the CL, Jigsaw II model in teaching reading comprehension proved to be more effective than traditional methods in developing the higher-order reading comprehension skills of university-bound Arab learners of English as a foreign language. These learners had satisfied all college admission requirements but needed to improve their English proficiency in order to function effectively in an all-English curriculum at the college

level. Specifically, Jigsaw II was effective in enhancing learners' interpretive reading abilities that include making inferences, identifying adverb and pronoun referents, understanding implied cause/effect relationships, determining the author's purpose, figuring out the meaning of figurative language as well as reading written discourse critically by assessing the accuracy, timeliness, and appropriateness of information and determining the author's purpose and the propaganda techniques authors may use in order to influence the thinking and actions of their readers.

Most studies on the effects of CL have consistently indicated that this method improves students' English oral skills (Pattanpichet, 2011), English reading comprehension (Bolukbas, Keskin, and Polat, 2011; Meng, 2010; Law, 2011), and English writing (Roddy, 2009).

Teacher-centered classrooms rely on a pedagogical style in which the instructor transmits knowledge to the students (Knowles, 1970). In such cases, the student is highly dependent on the instructor for learning. In Cooperative learning classrooms, by contrast, instructors serve as learning facilitators rather than the sole knowledge source. The student becomes the focal point rather than the teacher, a technique that researchers have shown to improve thinking skills (Knowles, 1970; Tinto, 1997).

Therefore, learner-centered classroom environments are more likely to elicit higher order thinking gains than teacher-centered classrooms (Peterson & Walberg, 1979). In learner centered classrooms, students are more likely to work interdependently, which requires them to help each other in the learning process. The act of helping others and learning through interaction with others creates interdependence between students, which may lead to an increased desire for cognitive growth. Holtham, Melville, and Sodhi (2006) found that interdependent groups performed much more effectively than students who simply allocated work evenly among members.

3. COOPERATIVE LEARNING

Cooperative learning is defined as a set of instructional methods through which students are encouraged to work on academic tasks (Slavin, 1995). It also refers to a teaching technique where students work in groups on a certain activity in order to maximize one another's learning and to achieve certain goals (Johnson, Johnson, & Smith, 1998). The cooperation among students creates interdependence which may lead to increased motivation and cognitive processing. Collaboration among students in the learning process is a fundamental principle of effective undergraduate teaching (Antil, Jenkins, Wayne, & Vadasy, 1998; Astin, 1993; Chickering & Gamson, 1987; McKeachie, 1999; Pascarella & Terenzini, 2005; Tinto, 2003).

Thus, Cooperative learning has been found and suggested to be an effective solution to a wide range of academic problems. It is composed of teaching-learning techniques which stress higher level thinking skills and increase "higher-order learning as an alternative to ability grouping, remediation, or special education; as a means of improving race relations; and as a way to prepare students for an increasingly collaborative work force" (Slavin, 2010).

3.1 Elements that account for the success of cooperative learning

There are number of options for teachers to choose and implement cooperative learning methods. The five essential elements of cooperative learning include positive interdependence, face-to-face interactions, individual and group accountability, interpersonal skills and

opportunities for group processing (Johnson, Johnson 1990). These characteristics must also be taken into account while incorporating cooperative learning strategies into the classroom.

Dividing students into groups and expecting them to work together will not necessarily encourage cooperation. Group members frequently face the situations in which they are totally blank about the procedure. They might not know what to do; consequently, conflict can occur as members struggle with the demands of the task as well as managing the processes involved in learning such as dealing with conflicting opinions among members or with students who essentially loaf and contribute little to the group's goal (Johnson & Johnson, 1990).

The first element of cooperative learning technique is **positive interdependence** which requires students to depend on one another in order to complete a given task or assignment. A teacher can generate positive interdependence by ensuring that all students are assigned roles, materials are shared among members. Teachers should also observe that students agree with each other on strategies used to complete given task and group rewards are used to praise students.

The second element required for cooperative learning to be successful **is face-to-face interactions**. Teachers must provide space in a classroom environment for teams to meet with each other and have opportunities to share ideas, dialogue about possible solutions, resolve conflicts, and come to a consensus. Teachers should guide them to solve disagreements, differences in opinions and to interact positively when in a group setting. When the students are provided with a structured environment in which they help, encourage and support each other to achieve common goal or objective then face to face interactions will be fruitful and the outcome will be positive.

Individual and group accountability refers to the actual assessment of group interactions and the final product as well as the ways in which targeted feedback is provided to both the individual and the group as a whole. Key to success is to connect and bridge the gap between individual and group feedback. The group must understand that each individual plays a vital role in the success of the entire group and therefore must know ways in which each individual can improve as well as the overall group. Students can be motivated through rewards and constructive feedback. So they hold each other accountable and thereby expect individuals to interact well with each other, come prepared to the group meeting, remain on task and successfully complete the given assignment.

Effectiveness of cooperative learning depends on social interaction and peer relationships. Therefore, **soft skills or interpersonal skills** are necessary for success. Students must not only have knowledge of soft skills but also appropriate ways of exhibiting those. If students lack knowledge of soft skills they should be explicitly taught. Through assigned roles, students learn the social skills required to lead a group, keep a group on task, encourage a group to continue when stumbled, etc. Archer-Kath et al. (1994) state "for cooperative learning groups to be productive, members must ask each other for information, give each other information, ask for and give each other help when they need it, and support and praise each other's efforts to learn"

Additionally, as noted above, students often need direct modeling with regard to how to handle conflict or disagreements in a group setting. Gillies and Ashman (1996, 1998) have consistently found that students who were trained to cooperate and help each other are: more inclusive of others, respectful and considerate of others' contributions, and provide more detailed explanations to assist each other's learning than students who have not participated in this training. The social skills that facilitate students' interactions during small group discussions include:

- active listening to each other,
- sharing ideas and resources,
- commenting constructively on others' ideas,
- accepting responsibility for one's behaviors,
- making decisions democratically,
- encouraging others for better performance.

The final component of cooperative learning is **group processing** which plays a crucial role in cooperative learning situations. It is essential for individual students and groups to be self-reflective; they should retrospect on the positive and negative aspect of their performance and ways to improve negative aspects. Questions such as the following are often used to stimulate this type of retrospection:

- What have we achieved?
- What do we still need to achieve?
- How might we do this?

3.2 Cooperative learning techniques used

Role play

Role play is any speaking activity when you either put yourself into somebody else's shoes, or when you stay in your own shoes but put yourself into an imaginary situation. Role play is an activity that brings variation and movements in the classrooms. Incorporating role play into the classroom adds variety, a change of pace and opportunities for lot of language production and also lot of fun. It is widely agreed that learning takes place when activities are engaging and memorable. While performing in role play quieter students get the chance to express themselves in a more forthright way. The world of the classroom is broadened to include the outside world; it offers a much wider range of language opportunities. Through role plays learners will improve their communication skills. Teachers are facilitators in this whole task. They are supposed to guide students to select the situations for role play and to group students.

Adam Blatner (2009) in his article **"**Role-Playing in Education" says that role-playing is a methodology derived from socio-drama that may be used to help students understand the more subtle aspects of literature, social studies, and even some aspects of science or mathematics. Further, it can help them become more interested and involved, not only learning about the material, but learning also to integrate the knowledge in action, by addressing problems, exploring alternatives, and seeking novel and creative solutions. Role-playing is the best way to develop the skills of initiative, communication, problem-solving, self-awareness, and working cooperatively in teams, and these are certainly superior to learning of mere facts.

Steps to use role play method

1. Identify the situation: To start the process gather people together, introduce the problem, and encourage an open discussion to uncover all of the relevant issues. This will help students to start thinking about the problem before the role play begins.
2. Add details: Next, set up a scenario in enough detail for it to feel 'real'. Make sure that everyone is clear about the problem that you are trying to work through, and that they know what you want to achieve by the end of the session.

3. Assign roles: Identify various fictional characters involved in the scenario. Some of these may be people who have to deal with the situation when it actually happens. Allocate roles to the students involved in the exercise; they should use their imagination to put themselves inside the minds of the people that they are representing.
4. Act out the scenario: Each person can then assume their role, and act out the situation, trying different approaches where necessary.
5. Discuss what you have learned: When you finish the role play, discuss what you have learned, so that everybody involved can learn from the experience.

Jigsaw method

Jigsaw is perhaps the most widely known cooperative learning activity used to encourage communication in classroom. This method was invented and named in Austin, Texas, in 1971, by a graduate professor named Elliot Aronson. It was invented to help defuse an explosive situation in classroom and to help students to get along with one another. Professor Aronson realized that he needed to shift the emphasis from a patiently competitive atmosphere to a more cooperative one and jigsaw is the result of it. It is a cooperative learning technique in which students work in small groups. Jigsaw is a cooperative learning strategy that enables each student of a 'home group' to specialize in one aspect of a learning unit. Students meet with members from other groups who are assigned the same aspect, which is called 'expert group' and after mastering the material, return to the 'home' group and teach the material to their group members.

The purpose of the jigsaw is to develop teamwork and cooperative learning skills within all students. It helps developing a depth of knowledge, allows student to be introduced to the material and yet maintain a high level of personal responsibility. It also intends to disclose student's own understanding of a concept, as well as reveal any misunderstandings. The results of the study carried out by Ljubica, Kardaleska (2013) showed that for lengthier reading passages or demanding topics – which is the case with the ESP material, jigsaw approach is far more efficient method.

If we look at the traditional classrooms, the situation is that the students work individually and compete against each other for grades. The teacher stands in front of the class, asks a question, and waits for the students to indicate that they know the answer. Most often, a few students raise their hands and try to attract teacher's attention. Most of the other students sit calm and bob their head expecting that the teacher does not call on them. When the teacher calls on one of the enthusiastic students, the other students may become disappointed as those students had also tried to get the teacher's attention. If the selected student tells the right answer, the teacher smiles, nods approvingly, and goes on to the next question. In the meantime, the students who did not know the answer wind down. They have escaped being shamed this time.

Steps to use jigsaw method

Compared with traditional teaching methods, the jigsaw classroom has several advantages: most teachers find jigsaw easy to learn and enjoy working with it. It can be used with other teaching strategies. It works even if only used for an hour per day. Following are the steps to use jigsaw method in classroom:

1. Divide students into 5-6 persons jigsaw groups. The groups should be diverse in terms of gender, ethnicity, race, and ability. Appoint one student from each group as the leader. Initially, this person should be the most mature student in the group.
2. Divide the day's lesson into 5-6 segments. For example, if you want literature students to learn about William Shakespeare, you might divide a short biography of him into 5-6 segments such as;
    1. His childhood; 2. His works; the plays, the sonnets, and the poems; 3. Categories of his plays: comedies, histories, tragedies, romances; 4. Themes of his tragedies, comedies, etc.

   Assign each student to learn one segment, making sure students have direct access only to their own segment.
3. Give students time to read over their segment at least twice and become familiar with it. There is no need for them to memorize it.
4. Form temporary 'expert groups' by having one student from each jigsaw group join other students assigned to the same segment. Students leave their 'home' groups and meet in 'expert' groups. Expert groups discuss the material and brainstorm ways in which to present their understandings to the other members of their 'home' group.
5. Bring the students back into their jigsaw groups.
6. Ask each student to present his or her segment to the group. Encourage others in the group to ask questions for clarification. The experts return to their 'home' groups to teach their portion of the materials and to learn from the other members of their 'home' group**.**
7. Teacher should float from group to group and observe the process. If any group is having trouble (e.g., a member is dominating or disruptive), make an appropriate interference.
8. At the end of the session, give a quiz on the material so that students quickly come to realize that these sessions are not just fun and games but really count.
9. Teacher will assess students' degree of mastery of all the material. After observing the performance of all the students, he/she will reward the groups whose members reach the preset criterion of excellence or give extra points on their individual scores if this criterion is met.
10. Students will also need to evaluate themselves on how well their group did in the jigsaw (e.g., active listening, checking each other for understanding, and encouraging each other) and set goals for further interaction.

4. METHODOLOGY

Data collection and analysis

Data for the present research was collected from one hundred first year students pursuing their Bachelor's degree in Technology from Sanjay Ghodawat University in Maharashtra state. To check effectiveness of cooperative learning a questionnaire was developed for the students. Communication Process and Report Writing are the topics included in the first year B.Tech. (Professional Communication II) syllabus. The researcher used role-play method to teach communication process, and for report writing she used jigsaw method. Students' one to one interviews were also conducted to get their views on cooperative learning techniques. Selected students' performances were observed,

and video recorded. Analysis of the data collected showed remarkable improvement amongst the students. To know the effectiveness of these cooperative learning techniques from students' point of view, a five-point Likert Scale questionnaire consisting of fifteen statements was prepared and administered to the students.

The analysis of the students' responses to the questionnaire was done. Recordings of the students' performances in the selected situations were observed and analyzed to identify students' understanding and grasping of the terms/topics taught. Students' interviews were also analyzed to know whether they are comfortable with the cooperative learning techniques used to teach communication process and report writing.

5. Findings and Discussion

The following table presents statements and percentage of students' responses to the questionnaire used for the present study.

Table 1 Students' responses to the questionnaire

SN	Statements	SD & D	UD	SA &A
1	I enjoyed learning English language skills with cooperative learning techniques.	4.00%	4.93%	91.07%
2	I like to learn English Language skills with teacher centered class.	31.98%	7.40%	60.62%
3	I got opportunity to learn and express my knowledge in cooperative learning class.	7.46%	1.23%	91.31%
4	I was comfortable in my jigsaw group while sharing and discussing the topic.	3.70%	9.87%	*86.43%*
5	I like to listen my language teacher instead of taking part in activities.	80.62%	2.38%	17.16%
6	Cooperative Learning Techniques helped me to improve my confidence level.	2.30%	2.30%	95.40%
7	I was so much anxious while taking part in role play and jigsaw.	30.80%	19.75%	49.45%
8	I learnt team work, and leadership through cooperative learning techniques.	6.17%	7.40%	86.43%
9	I learnt so many new things from my team members while completing group activities.	6.17%	4.93%	88.90%
10	My understanding of terms/concepts was more in cooperative learning than in traditional class.	12.34%	3.58%	84.08%
11	I have to participate actively for the success of my team.	4.93%	8.64%	86.43%
12	I was active listener and participant to complete group activities on time.	9.81%	3.50%	86.69%
13	I enjoyed when my team members and teacher appreciated my performance.	3.70%	8.64%	87.66%
14	I faced so many difficulties while completing tasks/activities in cooperative learning class.	63.08%	9.87%	27.05%
15	I would like to continue learning with cooperative learning techniques.	4.07%	4.93%	91.00%

(Strongly disagree - SD, disagree - D, strongly agree - SA, agree - A, Undecided - UD)

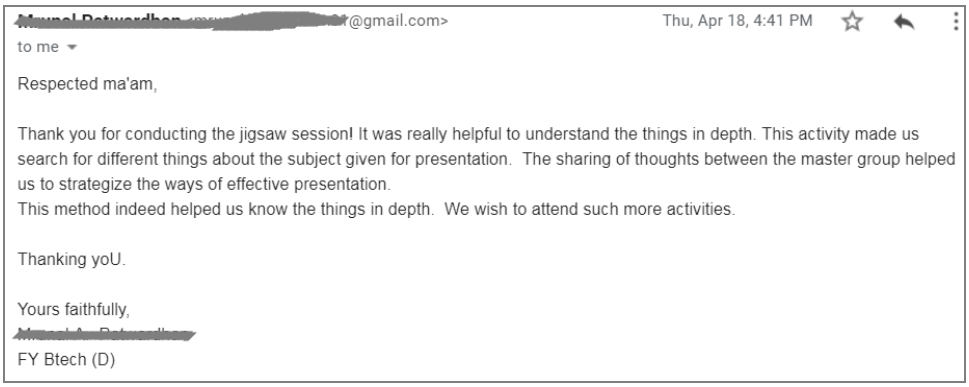
More than 91% students enjoyed learning English language skills with cooperative learning techniques (statement 1), took cooperative learning class as an opportunity to learn and express their knowledge with others (statement 3) and wished to continue learning with such techniques (statement 15). This shows that these students coming from rural and semi urban background and having good amount of language learning experience prefer active learning/cooperative learning techniques to learn English and communication skills. During interview also they opined that they enjoyed doing various activities as a part of learning and learnt many concepts and their usages very effectively. They also wished to have the same course in their higher classes and all the subjects should be taught in the same way.

Taking Johnson and Johnson's (1990) five essential elements of cooperative learning into consideration, some statements were added to check these essential elements. The result showed that the students also involved effectively and fruitfully when situations pertaining these five elements were created. More than 86% of the students felt that the ambience created in the classroom/language lab during their presentations/activities was very comfortable and they were confident enough to put forth their segment to their jigsaw group members effectively (statement 4). They learnt teamwork, leadership (statement 8) through cooperative learning and many new concepts from their group members (statement 9) such as, as replied during their interviews, cooperation, patience, effective listening, conflict resolution, politeness, etc. Considering the importance of everyone's role in teamwork they realized that their role was crucial in the ultimate success of their team (statement 11) and took more efforts to make their presentations effective. Moreover, the same percentage of students were active listeners and performed actively for the success of their teams (statement 12). Other team members' and teacher's appreciation of one's performance encouraged them to be active participants (statement 13). These results clearly indicate that positive interdependence, face-to-face interactions, individual and group accountability, interpersonal skills and opportunities for group processing are truly crucial elements for cooperative learning strategies to be successful.

Total of 60.62% students' responses preferring teacher centric class (statement 2) to learn English language skills was quite surprising initially. However, when asked for justification during interviews, they expressed that when teacher is very communicative, interactive and uses Information and Communication Technology (ICT) enabled teaching methods for teaching then they prefer listening the teacher as the teacher is more effective than the teacher teaching using traditional methods. Otherwise, as expressed by more than 80% of students, they would prefer to learn language skills by getting involved in various cooperative learning activities, share their knowledge with others, as well as listening others for improving themselves than just listening their language teacher continuously (statement 5).

As they got opportunities to face audience and express their knowledge to their group members through role play and Jigsaw, more than 95% of the students agreed that cooperative learning techniques helped them to improve their confidence (statement 6). Moreover, for more than 84% students it also helped them in understanding various concepts as they actively participated in the given tasks (statement 10).

The students' feedback on effectiveness/usefulness of these techniques was also taken. From their responses, it was observed that these techniques truly helped the students. Following are samples from their responses.



[redacted]@gmail.com> Thu, Apr 18, 4:41 PM

to me

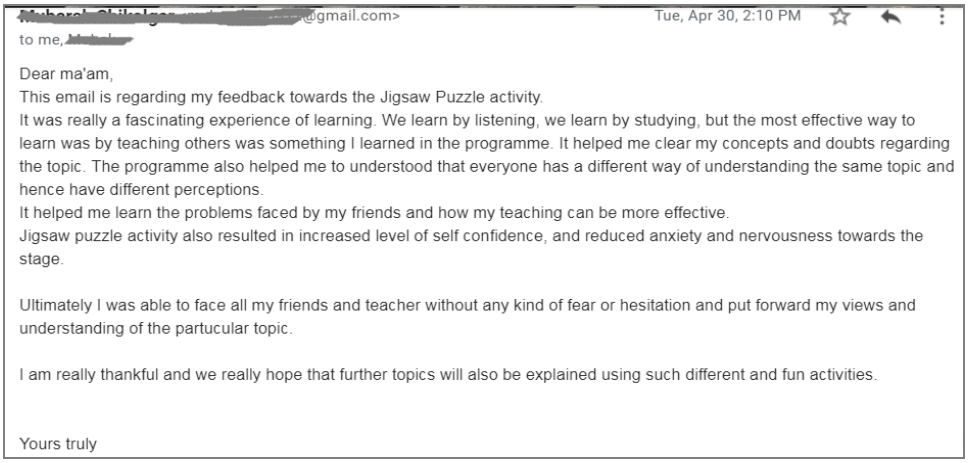
Respected ma'am,

Thank you for conducting the jigsaw session! It was really helpful to understand the things in depth. This activity made us search for different things about the subject given for presentation. The sharing of thoughts between the master group helped us to strategize the ways of effective presentation.
This method indeed helped us know the things in depth. We wish to attend such more activities.

Thanking yoU.

Yours faithfully,
[redacted]
FY Btech (D)

Image 1 Sample student feedback



[redacted]@gmail.com> Tue, Apr 30, 2:10 PM

to me, [redacted]

Dear ma'am,
This email is regarding my feedback towards the Jigsaw Puzzle activity.
It was really a fascinating experience of learning. We learn by listening, we learn by studying, but the most effective way to learn was by teaching others was something I learned in the programme. It helped me clear my concepts and doubts regarding the topic. The programme also helped me to understood that everyone has a different way of understanding the same topic and hence have different perceptions.
It helped me learn the problems faced by my friends and how my teaching can be more effective.
Jigsaw puzzle activity also resulted in increased level of self confidence, and reduced anxiety and nervousness towards the stage.

Ultimately I was able to face all my friends and teacher without any kind of fear or hesitation and put forward my views and understanding of the partucular topic.

I am really thankful and we really hope that further topics will also be explained using such different and fun activities.

Yours truly

Image 2 Sample student feedback

As pointed out by many researchers (for example Patil, Sunanda and Tripti Karekatti, 2015) anxiety is one of the major constrains for engineering students' communication skills development. In the present study it was also found that only 30.80% of the students were not anxious while taking part in role play and jigsaw activity (statement 7). The rest of the students were either anxious or unaware about their anxiety. When they were asked the reason of their nervousness, they replied that it was because they were taking part in such activities and performing in front of their friends for the first time. They knew that the success of team or group depended on their individual contribution to the team. However, as reflected in statement 14, only 27% of the students faced many difficulties while completing tasks/activities in cooperative learning class. This clearly reflects that anxiety appears just at initial stage, once they are engaged in activities they feel less anxious.

6. CONCLUSION

From the findings of the present study, it can be concluded that to help ESP learners overcome their anxiety in language learning, cooperative learning strategies such as role play and jigsaw can play pivotal role. In addition, to foster various interpersonal skills such as leadership, team skills, presentation, positive attitude, cooperation, conflict resolution, and increase confidence of ESP students, cooperative learning strategies should be used by ESP teachers. Step by step procedure of such strategies helps students to perform better and improve faster. The observation conducted by the researcher also confirmed that most of the students were able to take active part in the lesson by answering questions during and after the lesson. Therefore, it is strongly recommended that various cooperative learning strategies, especially jigsaw and role play, should be used to teach English Communication Skills to ESP students.

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Original scientific paper

E-LEARNING WEB APPLICATION FOR TEACHING ENGLISH FOR SPECIFIC PURPOSES - "ENGLISH AT A CLICK"

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Abstract. *The web application "English at a Click", presented in this paper is used for learning specialized English. The application can be integrated into a part of a larger distance learning system, used as a supplement to traditional learning or as an independent web application. The current version of the application is implemented as an independent web application. The basic goal is to show the different contexts in which an English word can be used, which helps the user to choose the most appropriate term when translating a text from English into Serbian language and inversely. The application is in the prototype phase and it's being tested. The tool presented in this paper was created on a free workspace on Oracle Cloud that the author uses for teaching purposes. The application was created with the idea to facilitate the learning of specialized English using modern technologies. The main advantage of the application compared to similar solutions is that it allows automatic text editing. The words from the text are replaced by the selected synonym only in the sentences that the user marks, very simply, with just a few clicks.*

Key words: *E-learning, Language learning, Web application, Synonyms, ESP*

1. INTRODUCTION

The way that knowledge is transferred has changed over time, and the development of technology plays a significant role in this process (Radenković 2015). The process of acquiring knowledge, today, can take place without a physical presence in the classroom, so in addition to traditional learning methods, there are e-learning, distance learning (e-learning and traditional learning in one) and a mixture of these (Schertler-Rock and Bodendorf 2006) called "blended learning". The term "blended learning" describes an approach to education that combines traditional education approaches when the teacher meets with students (either in school or through modern technologies) and e-learning approaches. In practice, electronic and traditional education methods are often combined.

Accelerated way of life and work, fast exchange of information and communication on a global level have led to an increased need for learning foreign languages. Whether it is a general language, the language of the profession or a business foreign language, there is a need to learn the language over the Internet, using computers or other technological

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advances (Radić Branisavljević and Milovanović 2014). With the development of technologies, especially computers and the Internet, and now more and more mobile telephony, the ways in which modern technologies have been applied in language teaching have changed. The traditional way of learning a language through direct communication between teachers and students should not be changed, but it can certainly be supplemented and improved by using translation tools and applications on the network and mobile devices(Medvedev 2016).

One of the illustrations of machine translation, Google Translator, quickly gained popularity and, with incredible technological progress, made numerous changes in the process of learning foreign languages.

Machine translation quickly gained popularity and, with incredible technological advances, introduced numerous changes in the process of learning foreign languages. It is free technology that is increasingly attracting the attention of students(Tuzcu 2021). Research on the application of machine translation in language learning (Kumar 2013) shows that students use machine translation to learn foreign words (Chandra and Yuyun 2018), they conclude that students use the Google Translate application while learning a language, mostly for finding and translating words, and to a lesser extent for translating full sentences or texts. One of the reasons is that machine translation very often providing a literal translation, especially with a longer sentence, inaccurate grammatical output, and inequivalent translation of cultural references. Because of these downsides, all respondents tend to minimize their GT use to be only in consulting word level, while fewer respondents in both word and phrase level (Chandra and Yuyun 2018). The results of the study (Lee 2020) show that the use of machine translator as a language learning tool reduces the level of lexical and grammatical errors.

Google Translate is one of the most popular translation applications. Google developed this application in April 2006 to translate words, sentences, paragraphs, and web pages from one language to another. Google Translate offers text input, voice mode, and mobile scanning. Using this application is very simple, after entering a word or sentence, the user only needs to select the language, word or sentence to be translated (Ying, Theresia, and Febriana 2021). Data obtained from a survey among students, in a study (Habeeb 2020), show that survey participants were satisfied with the simple use of the application. Easy access and fast translation are positive sides, while grammatical errors and deficiency of proofreading tools have been identified as basic deficiency (Fahim 2021). Recently, the application has been enhanced with new functionalities. When the user enters a word, synonyms are displayed on the screen, as well as sentences (definitions, contexts) in which the term can be used. Definitions refer to only one expression, one word. The application "English at a Click", which is presented in this paper, is based on a similar principle. The main difference is that in the presented application, the text in English is entered or the texts that exist in the database, which were previously entered by other users, are used. All words from the text, which are in the dictionary, are links to a web page with their synonyms. After selecting the synonym, the application changes the originally entered word directly in the text, and only in the sentences that the user chooses.

The first part of this paper presents an overview of the research on the use of the technologies in English language learning. The second part of the paper presents the web application "English at a Click", which provides assistance to the users in translating text

and learning specialized English. The third part presents the results of the research on the use of web applications, in which students and educators participated.

2. The Concept and Development of E-Learning

During the 20th and 21st centuries, there is an accelerated development of technology, which has led to major changes in the way the educational process takes place. New teaching and learning methods rely on a range of technological innovations to enable participants in the process to fully commit to their roles and the goal of the educational process: knowledge transfer and acquisition.

Distance education is a way of realization of the educational process in which the performance and monitoring of teaching can take place in different places and at different times. Distance education developed in parallel with the development of information and communication technologies(Radenković 2015). Modern distance education is based on multimedia and internet technologies, so it is more often called e-learning (Schertler-Rock and Bodendorf 2006).

The term e-learning describes education that takes place exclusively over the Internet and it does not contain any face-to-face contact between lecturers and students. The term "blended learning" describes an approach to the education that combines traditional education approaches when the teacher meets with students (either in school or through modern technologies) and e-learning approaches. In practice, electronic and traditional education methods are often combined.

E-learning applications include the storage and distribution of digital materials (presentation) and synchronous and asynchronous communication, simulations, interactivity, the use of multimedia and other content that can be easily modified and improved (Pain and Le Heron 2003).

2.1. Pedagogical aspects of e-learning

In addition to knowing the different ICT tools, it is important for every teacher to know how to integrate technology into pedagogy and use it to promote student-centered learning. At the process of creating teaching materials or designing electronic courses to supplement teaching in the classroom, the teacher will be helped by the recommendations of traditional learning theories that apply to the conditions of e-learning.

Behavioral theory defines learning as a process that takes place when there is an external force, such as reward or punishment. Some authors are of the opinion that this theory is directly related to the traditional way of teaching, but it can also be successfully applied in the context of e-learning. Online learning courses have a methodically structured content of lessons, where teaching topics are formed from easy to difficult, from known to unknown. Online testing allows the teacher to measure student achievement and achievement of learning outcomes.

Cognitivist theory emphasizes that the most important thing in the learning process is how students remember certain contents, how they notice, interpret, understand, remember, connect, analyze and evaluate. Learning is considered a process of organizing, storing and retrieving data and information and is associated with the acquisition of new models and ways of solving problems of existing knowledge. Typical teaching methods, according to cognitive theory, include the use of examples and models for acquiring

knowledge and concepts, categorization and comparison exercises, making diagrams and schemes, relying on previously learned in acquiring new knowledge (Nejković and Tošić 2014). When we talk about e-learning, this approach can be applied keeping in mind that students in the e-learning process connect numerous data collected from different sources on the Internet.

Constructivist pedagogy sees the student as an active subject who acquires knowledge through conscious processing of information and personal interpretation of what has been learned. This theory of learning shifts the learning paradigm from the student-centered teacher, enabling the student to construct knowledge through active research, experimentation, collaboration, and the use of their existing knowledge. To achieve this, the student must be presented with sources of knowledge, as well as appropriate challenges and tools for cooperation with peers, while the teacher takes on the role of facilitator(Jovanovic, Stankovic, and Todosijevic 2015). The purpose is to teach students how to get on with new situations, and the use of e-learning definitely represents a new situation that requires independence, self-responsibility and activity of students in shaping their own knowledge and competencies (Bulić 2018).

Connectivism, developed by George Siemens (Siemens 2005), emphasizes the importance of digital devices, hardware, software, and network connections in the learning process. The theory emphasizes the development of "meta-skills" for evaluating and directing information and network connections, and emphasizes the importance of recognizing learning models as learning strategies. Connectivists recognize the impact that new technologies have on human knowledge and argue that technology is reshaping the ways in which people create, store, and distribute knowledge. This idea is being demonstrated through increasingly powerful initiatives to create free, open source software. This also includes free access to scientific and other works. Sharing content is no longer considered an unethical act but it is the essence of creation in terms of creating learning networks (Bulatović, Bulatović, and Arsenijević 2012).

3. E-Learning in Foreign Language Learning

There are four language skills that need to be mastered when learning a foreign language: speaking and writing, which are active language skills, and listening and reading, which are passive language skills (Radić Branisavljević and Milovanović 2014). All of these skills can be developed using a variety of applications available online. It is possible to practice and improve them, depending on or independently of the teacher, thanks to technology. There are numerous materials available to students on the Internet, so they can choose the method and the way in which they will use modern technologies.

The traditional way of learning often lacks communication with other users, so that young people can practice conversation better. Technology has the potential to overcome this limitation and provide students with the opportunity to communicate with others, often with English-speaking people or students from other countries with whom they can communicate exclusively using English. (Laborda 2014). Synchronous solutions, such as video conferencing (Phillips 2010) and face-to-face interactions are becoming increasingly popular as language learning tools.

The development of multimedia, the Internet, as well as the application of information and communication technologies in everyday life, are a condition for the increasing use

of computers in teaching foreign languages (Computer-Assisted Language Learning, CALL). The development of CALL began in the late 1950s with simple repetition exercises, and today it has evolved into interactive multimedia packages and online applications that enable personalized learning with the aim of developing "intelligent" language learning systems. (Seljan 2019). CALL can be performed in different places, whether it is a classroom, computer lab with or without the presence of lecturers, offices, houses, or any other place (Knežević 2017). The computer can have a dual role in learning foreign languages: it can be a tutor or a learning tool. Authors who see the computer as a tutor see the computer as a device that provides interactive material for learning and practicing language (replaces learning with the teacher, as in traditional learning), and is a tool for those who use it as a tool for learning and communication. improve language skills (replaces textbooks, dictionaries, books …) (Knežević 2017).

The application of technology has significantly changed the teaching methods of the English language. In traditional classrooms, teachers and students communicate together in the classroom, and teachers explain the teaching material on the board. The use of multimedia texts in the classroom helps students to become better acquainted with vocabulary and language structures. Research authors (Dawson, Cavanaugh, and Ritzhaupt 2008) and (Pourhosein Gilakjani 2013) in their works, they talk about the fact that the use of technology can create an atmosphere for learning that is focused on the student and not on the teacher, which leads to positive changes in the process of language learning. They also add that with the use of computer technology, language classes become interactive, with a lot of meaningful learning tasks. Technology encourages students to learn individually and acquire responsible behavior (Gangaiamaran and Pasupathi 2017). According to (Ahmadi 2018), the use of the Internet increases student motivation.

In recent years, the widespread use of mobile devices has led to the new term MALL (Mobile-Assisted Language Learning), which differs from CALL in that personal, portable devices are used in language learning to enable new ways of learning. (Kukulska-Hulme and Shield 2008). One of the disadvantages of CALL is that some teachers do not have enough knowledge to use a desktop computer, or do not have them, and as a solution to this shortcoming (Kukulska-Hulme 2009) suggests the use of MALL. Important features of mobile devices are portability and mobility, as well as individuality. Desktop computers cannot offer these features (Ahmadi 2018).

As mobile technologies have evolved over time, so have advanced language learning applications. In addition to the already traditional purpose of communication, smart mobile devices are used to access the Internet to search for information, send e-mails, read e-books, and even make purchases. Mobile devices have also enabled location-independent learning at any time and outside the classroom (Yang 2013).

3.1. Advantages of using modern technologies in language learning

Greater students' interest in learning - Today, classical traditional teaching methods and environment are less and less popular, especially with children and youth, while multimedia technologies with sound and visual effects, animations are becoming more common in the language learning process. Their advantage is that they provide a large amount of different information. Multimedia technology transcends time and space, creating a more vivid, visual and authentic environment for learning English, which

increases students' interest and motivation for learning and their involvement in teaching activities (Shyamlee and Phil 2012).

Students are not passive recipients of knowledge - In traditional teaching, students are sometimes less able to understand a certain language, because it is usually frontal type teaching and there is no great communication and interactivity, especially if a large group of students is in class. Students are often passive recipients of knowledge, so it is difficult to achieve the goal of communication. The use of modern internet technologies requires the integration of teaching and learning and provides students with greater incentives to think. Class activities such as group discussion and debate also provide more opportunities for communication between students and between teachers and students.

Better interaction between teachers and students - Teaching that uses modern technologies emphasizes the role of students and increases the importance of interaction between teachers and students. The main feature of such teaching is the improvement of students' ability to listen and speak and develop their communicative competence. The use of modern technologies creates a good platform for the exchange of information between teachers and students, while providing a language environment that improves the traditional model of teaching in the classroom. In this way, teachers in the classroom no longer enter only the information that students receive in a passive way (Shyamlee and Phil 2012).

3.2. Disadvantages of using modern technologies in language learning

The teacher does not have a leading role in the teaching process - The application of modern technologies should be an auxiliary instrument in the teaching process, because if teaching is completely dependent on ICT technologies, teachers cannot play a leading role in teaching. In practice, many teachers use multimedia technologies, but many of them are not skilled enough to handle and use them. When students are focused only on the screen, there is not enough direct contact between students and teachers.

Limiting students' opinions - It is clear that language teaching differs from scientific subjects, because language teaching does not require e.g. demonstration of different steps in solving a problem, teaching and learning take place through questions and answers of teachers and students. Teachers ask questions in real time and make students think. In this way, students develop the ability to detect and solve problems. However, if communication does not take place in real time, students cannot give immediate feedback. Nurturing students' thinking skills should be one of the main goals in teaching and using multimedia technology.

Reduced speech communication - The introduction of modern technologies with audio, visual and textual effects fully satisfies students 'audio and visual requirements and increases their interest, but also leads to a lack of communication between teachers and students and the replacement of teachers' voices with digital sound.

The use of modern technologies has led to a decrease in students' reading competence. Text words are often replaced by sound and image, and handwriting by keyboard. All in all, multimedia as an auxiliary instrument cannot replace the dominant role of teachers and is part of the entire teaching process. In addition, it integrates visual and textual demonstration with the teacher's experience to jointly contribute to increasing students' attention, speaking, reading and writing.

3.3. Classification of language learning applications

Foreign language learning applications, especially mobile applications have been developing rapidly in recent years and have recorded a large number of downloads by users around the world. It is a problem for students how to choose the right application that they need and that is adapted to the level of knowledge of the language that the student (user of the application) has. According to a study on the use of mobile applications for learning foreign languages (Gangaiamaran and Pasupathi 2017) we can define the following three types of applications: applications for primary school students (Primary Learners), for secondary school students (Secondary Learners) and for students and adults (Tertiary Learners).

Primary Learners - Recent research shows a significant increase in the use of mobile devices in young children (Gangaiamaran and Pasupathi 2017). Children like to use mobile devices most often for play. However, preschool children do not have the ability to assess what is good and what is bad for them, especially in the use of mobile devices. It is the duty of parents and teachers to guide children and select appropriate teaching content that can help children learn a foreign language. (Kim and Smith 2017).

Primary Learners include children belonging to the age group of 3 to 10 years. Children of this age group learn English, which begins with the alphabet and learning the letters, then spelling, and then writing words. At that age, children often listen to songs and animated stories. Learning the colors, shapes, names of animals, fruits, vegetables and more can improve their learning of words. Mobile applications have been developed to meet the needs of children in this age group. Some of the well-known applications are: *Pogg — Spelling & Verbs, Speech with Milo Apps, Phonetics Focus, MindSnacks* and others.

Secondary Learners - Students aged 12 to 17 belong to the group of secondary learners. Research conducted (Liu et al. 2014) show that the use of computers increases students' motivation and interest in learning. Jennifer Betsy Redd in her experiment (Redd 2012) comes to the conclusion that the use of language learning applications in high school students increases the vocabulary of foreign language words that they learn, for a period of three weeks. Elementary school students learn the basics of the language, while high school students move to a higher level and learn speech, grammar, spelling, pronunciation. Some of the well-known mobile applications for learning secondary learners are: *Rosetta Stone, Memrise, Open Language, Duolingo*.

Tertiary Learners - Tertiary-level students include students and adults. With the accelerated development of applications for learning English and the popularization of mobile devices, it has led to the fact that students are becoming more and more interested in learning foreign languages using modern technologies. According to relevant research (Gangaiamaran and Pasupathi 2017), learning a language with the help of a mobile phone (MALL) can not only improve students' knowledge but also increase their motivation to learn. The rapid development of technologies enables the integration of different media, for example, text, images, animations, audio and video within one application. There are many applications related to learning English for students and adults, but sometimes it is difficult to choose the right application from the large number offered. Some of the well-known mobile applications for language learning tertiary learners are: *Sounds Right, Speech Tutor, Voxy, English Listening and Speaking, Exam Vocabulary Builder, Sentence Builder for iPad*.

English for specific purposes - ESP (English for specific purposes) is an approach to English language teaching in which all decisions are made regarding both the content and the methods to be used, based on the reasons why students learn English. (Dabić 2015).

Linguists have noticed a difference between, for example, English, which is present in trade, and English in engineering, which has naturally led to the development of English language courses for specially formed groups. It is very difficult to give a clear division of the English language of the profession (Dabić 2015). Regardless of how they divided the development of ESP, some theorists agree that research in ESP was initially related to the field of English for Science and Technology (EST), so EST was initially synonymous for ESP (Knežević 2017). The ESP can be divided into three categories: English for Science and Technology (EST), English for Business and Economics (EBE) and English for Social Sciences (ESS).

The number of foreign students graduating from universities in English-speaking countries has been steadily rising in the last few years before the Covid pandemic19. Universities in English-speaking countries, in order to attract as many foreign students as possible, are creating English language courses for academic purposes (EAP), which aim to bridge the perceived gap between language knowledge and academic skills that foreign students possess before studying(Fedorova 2021).

Because specific student needs and authentic assignments are paramount in business English and other ESP courses, many language teachers integrate modern technology into their courses that students use such as using the Internet as a source of authentic material, virtual conference platforms, simulation software, or recent years. mobile technologies (Laborda 2014).

3. ENGLISH AT A CLICK

The web application “English at a Click” was created using Oracle's Oracle APEX web application development tool. The data is stored in an Oracle database. Application functions and procedures are written in Oracle PL/SQL language.

Oracle database is one of the most commonly used databases, characterized by high performance, security, scalability and ease of use.

The APEX environment enables rapid development of web applications by focusing on simplifying the development cycle (Zaharieva and Billen 2009). The tool provides the ability to use additional components and libraries, so that applications have an intuitive user interface, easy to use, on the one hand, but also all the necessary functionality to run the application. The use of APEX allows full use of all database objects, complex queries to call PL/SQL packages and procedures. APEX is a very stable and reliable technology for web application development. Web applications created using the APEX platform are accessed using a web browser. The platform is independent of the operating system, and users of APEX web applications can, from different operating systems, access the application with any web browser.

The web application “English at a Click” presented in this paper is used to learn specialized English. The application can be integrated into a part of a larger distance learning system, used as a supplement to traditional learning or as a stand-alone web application. The tool is in the testing phase, and is located on the Oracle APEX server that the author uses for teaching purposes. A demo version of the application will be shown later in this paper. The current version of the application is implemented as a standalone web application. Figure 1 shows the appearance of the home screen after logging on to the administrator.

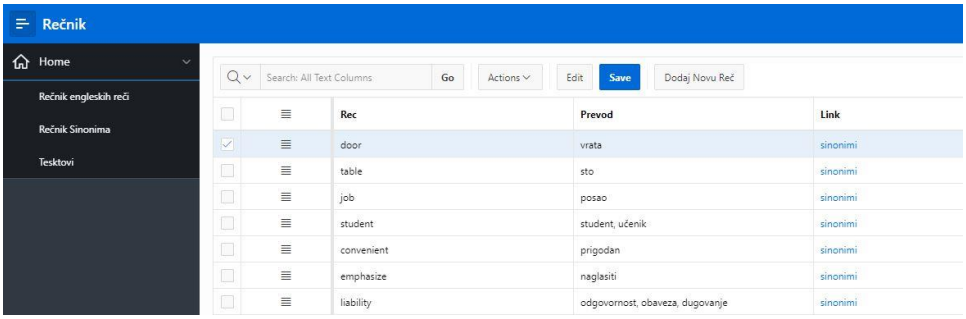

Fig. 1 The home screen after logging in to the administrator

When logging in to the system, the application administrator enters English words into the dictionary and their translation into Serbian. Every word can have synonyms. The administrator enters synonyms and links them to selected words from the dictionary. For each synonym in the database, the translation into Serbian and examples of sentences in which it is used is remembered. The idea is to show the different contexts in which an English word can be used, which will help the user to choose the term that is best used when translating the text. Figure 2 shows the form for entering and changing synonym data.

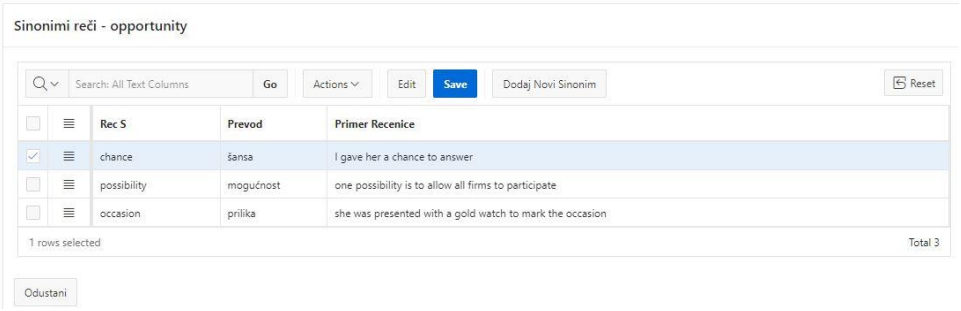

Fig. 2 Form for entering and changing synonym data - administrator

The user can access the application without logging in to the system. The current version of the application is open to all users. Depending on further development, there is a possibility to restrict access only to users with access parameters.

After launching the application, the main menu displays links to the *Dictionary of English Words*, *Dictionary of Synonyms and Texts* pages. The user and the administrator have the ability to sort words and synonyms, as well as filter them by different criteria. Figure 3 shows the layout of the Dictionary of English Words page. Figure 4 shows the procedure for filtering words from the dictionary, and Figure 5 shows the layout of the *Dictionary of Synonyms* page.

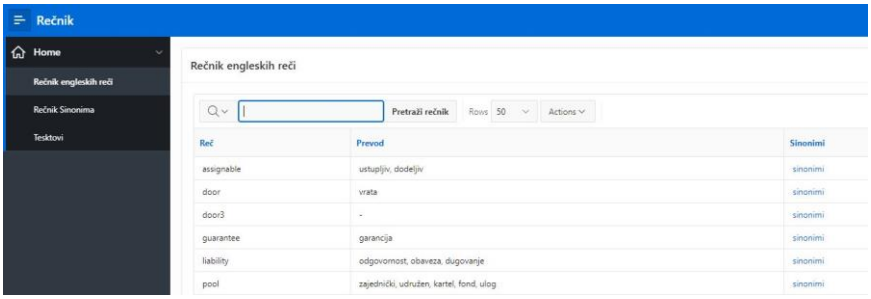

Fig. 3 Page layout *Dictionary of English words*-user

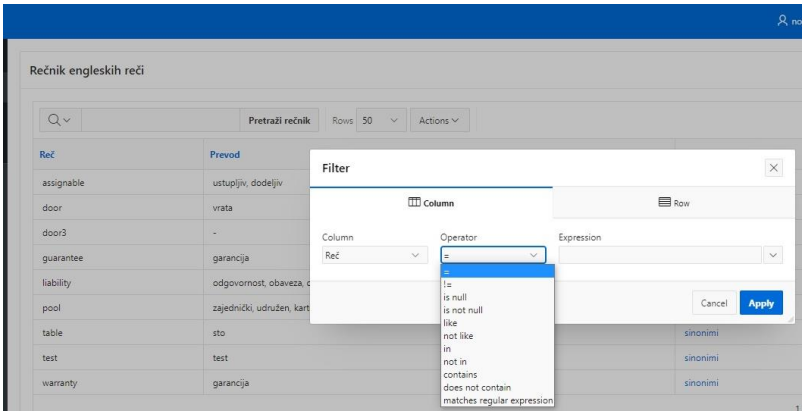

Fig. 4 Words filtering

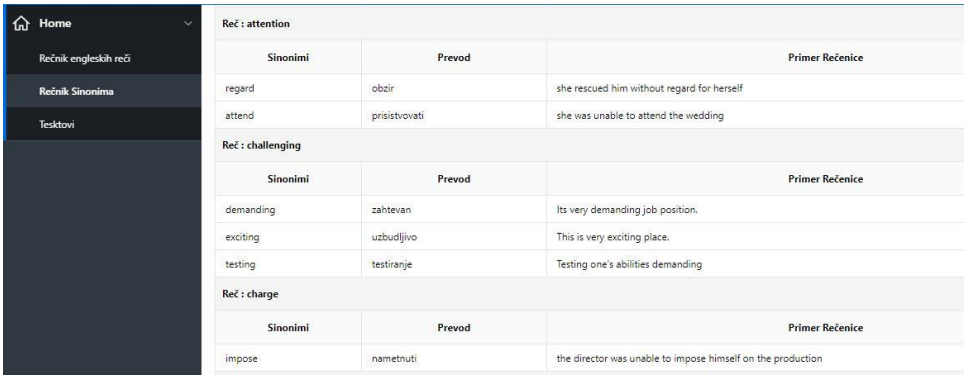

Fig. 5 Page Dictionary of Synonyms

The user has the option to enter the desired text himself. After entering the text, it can be edited, ie there is an option to delete parts of the text, add new words, sentences, etc. When the text editing is finished, by clicking the *Finish Text Editing* button, the program divides the edited text into sentences and finds the words that are in the text and in the

dictionary of English words. Those words become links to a new page that contains their synonyms. Figure 6 shows the text editing page.

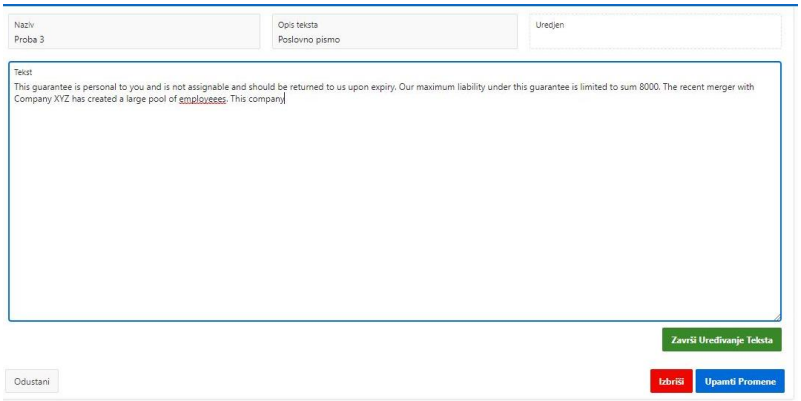

Fig. 6 Text editing page

Each word from the text that is in the dictionary of English words and has synonyms is linked, and by clicking on the link the user opens a new page showing all the synonyms of the selected word, with translation and sentences in which the synonym can be used. The dictionary of English words is stored in the Oracle database. On the same page, the user can see all the sentences, from the entered text which contains the selected word. The user has the option to select one synonym by which he wants to change the selected word, by simply checking the box in front of the synonym. Also, by checking the box in front of the sentences from the text that contain the selected word, the user marks the sentences in which he wants to replace the selected English word with the previously selected synonym. The application was created with the idea to facilitate the learning of specialized languages. Figure 7 shows the layout of the text with linked words that are in the dictionary and have synonyms. Figure 8 shows a page with synonyms of the word that the user opens by clicking on the word. Figure 9 shows the appearance of the text after replacing it with the selected synonym.

In the example shown, the word "meeting" was chosen, which was replaced by the synonym "conference" and only in the first sentence, although the word "meeting" appears in two sentences in the text.

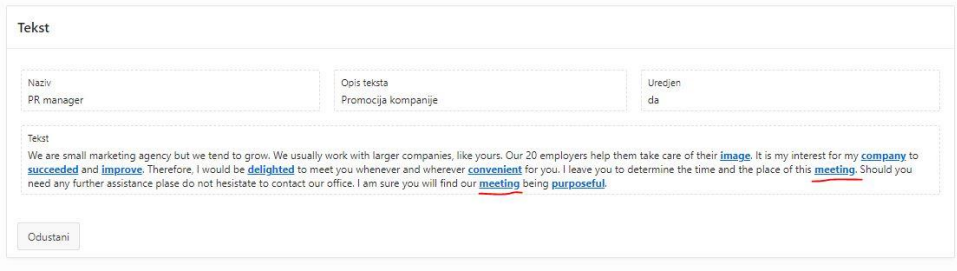

Fig. 7 Text layout with linked words

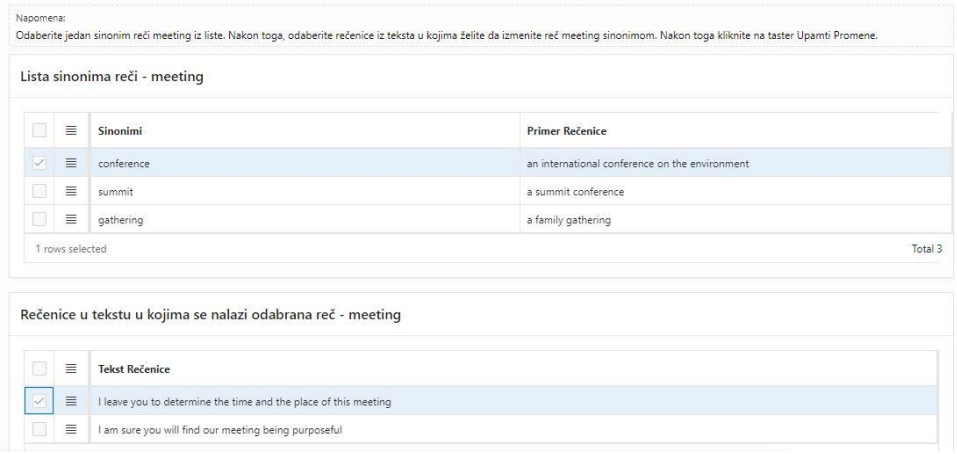

Fig. 8 Page with synonyms of the selected word

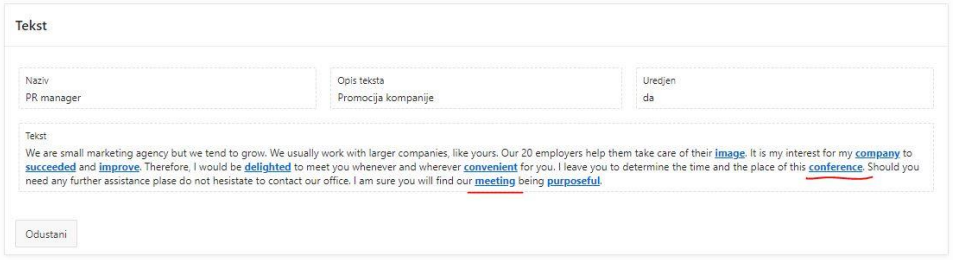

Fig. 9 The appearance of the text after replacing it with the selected synonym

The application is adapted to different types of screens, so it can be used on desktop computers, but also on mobile devices. To run the application, the device must have one of the well-known web browsers, GoogleChrome, MozillaFirefox, Opera, etc. installed.

4. RESULTS OF THE RESEARCH

The research on the use of the “English at a Click” application was conducted on a sample of 43 respondents. The participants in the survey are students of the faculties of natural and social sciences, as well as educators. The layout of the questionnaire is shown in Annex 1 of this paper. The research measured the following four parameters: ease of use of the application, usefulness of the application, attitude towards use and satisfaction with the application. When asked about the general impression of the application, which the respondents rated with grades from 1 to 5, the average grade is 4.51, which leads to the conclusion that the survey participants have a very positive attitude towards the application. The second, third and fourth questions concern the ease of use. Respondents rated simplicity with an average score of 3.96. Based on this, somewhat lower assessment, we can conclude that the further development of the application should be

directed towards making its use simpler and the degree of interaction greater. The fifth, sixth and seventh questions refer to the perceived usefulness of the application. Survey participants rated the usefulness with an average score of 4.27. Questions eight, nine and ten refer to the user's attitude towards the use of the application. The average score is 4.84. Such a high average score indicates that respondents have a positive attitude towards the use of the application and that applications of this type can be very useful when translating and learning English. Questions eleven and twelve relate to user satisfaction with the application. The average rating is 4.79. The total average score is 4.48. Figure 10 shows a graphical presentation of the research results, the average assessment of the general impression of the application and the average assessment of four parameters measured by the research: ease of use of the application, usefulness of the application, attitude towards use and satisfaction with the application.

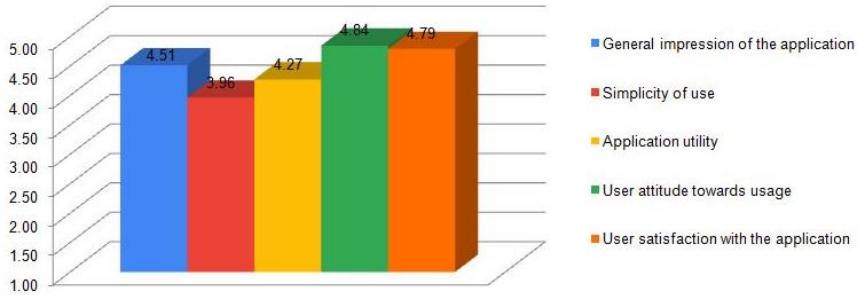

Fig. 10 Graphic presentation of research results

Based on the respondents' comments, we can conclude that, according to them, the application is interesting, that it is useful, and there were a couple of suggestions regarding the application upgrade. Respondents' observation is that the dictionary should be supplemented with new words and synonyms. One suggestion refers to the number of steps in the word processing process, which, according to the answers of the respondents, should be reduced.

Based on the analysis of the results, we can conclude that the application ”English at a Click” is useful, that respondents are satisfied with its use and believe that applications of this type are needed in the language learning process, but also as an aid in translating, learning and using specialized English. On the other hand, there are certain shortcomings, mostly of a technical nature, which will be the subject of further research by the authors. The implementation of the new version of the application should eliminate the observed shortcomings, and the plan for upgrading and improving the application is presented in the next chapter of this paper.

Questionnaire layout

“We would like to ask you to participate in the research that analyzes the work of the web application “English at a Click”. Participation in the research will help us determine the usefulness of the application and the ease of its use. You are expected to complete a questionnaire that will take you about 5 minutes. Participation in the research is voluntary

and you can cancel at any time. The data will be collected and stored anonymously and will be used exclusively for scientific purposes".

I completely disagree 1
I partially disagree 2
I'm not sure 3
I partially agree 4
I totally agree 5

1. On a scale of 1 to 5, rate your general impression of the application (1-negative, 5-positive)	1	2	3	4	5
2. On a scale of 1 to 5, rate your impression of the user interface (1-negative, 5-positive)	1	2	3	4	5
3. It was easy for me to use the application	1	2	3	4	5
4. I was able to find the information I wanted	1	2	3	4	5
5. The application was useful to me when translating the text into English / from English to Serbian	1	2	3	4	5
6. The application made it easier for me to understand the meaning of synonyms of different English words	1	2	3	4	5
7. If I continued to use the application I would learn new words in English	1	2	3	4	5
8. I think it is good to use applications like this because I can translate texts that use specialized English in a simpler way	1	2	3	4	5
9. I think it is wise to use similar applications because you can learn a lot of new terms and synonyms for specialized English	1	2	3	4	5
10. I like the idea of continuing to use the application in my work/language learning	1	2	3	4	5
11. While using the application, it was interesting to me that I could choose sentences from the text in which I want to replace the English word with a synonym	1	2	3	4	5
12. I am pleased to have used the application	1	2	3	4	5
13. Comments and recommendations for improvement	/	/	/	/	/

5. CONCLUSION AND FUTURE WORK

The English e-learning tool presented in this paper is currently implemented as a standalone web application that provides a new way of learning specialized English and translating texts. The application is easy to use and can help the user when learning a language or translating text. There are also some limitations, which can be improved or removed in the further development of the application. The first noticed shortcoming is that the dictionary has a modest number of English words and synonyms, but since the application is in a demo version, in further development, the fund of words, synonyms, as well as sentences in which synonyms can be used will increase. One way to do this is to automatically retrieve words from some available databases. The new version of the application could contain the mentioned upgrade. This would facilitate the administration of the application, and users would have at their disposal a large fund of English words and synonyms, which would increase the efficiency of the application. Also, testing

showed that there is a bug when replacing the selected English word with a synonym, if the word is at the beginning of the sentence. In that case, the first letter of the synonym that replaces the word remains small, even though the first word is in the sentence. The author plans to identify the words that are changing in the next version of the application, using the ascii character code, and they are at the beginning of the sentence, ie they have the first capital letter, and correct the observed shortcoming. One of the topics of future research and improvement of the functionality of the presented application will be greater automation and a greater degree of interactivity. The author plans to reduce the number of steps in the text entry process, so that users can display the linked words in the text faster and with fewer interactions. Further development of the application could also refer to the introduction of restrictions on access to the application only for registered users. In that case, it would be necessary to store access parameters in the database, as well as user data. Further development of the tool goes in the direction of eliminating the identified shortcomings, as well as more intensive testing.

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Review research paper

WHAT DO UNDERGRADUATE STUDENTS AT ENGLISH MEDIUM INSTRUCTION UNIVERSITIES TELL US ABOUT EAP COURSES?

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Abstract. *This study aims to understand whether EMI students considered EAP courses as helpful in promoting their academic achievement and to unearth their ideas about the qualities of an ideal EAP course. Data were collected from 563 undergraduate students enrolled at three EMI universities in Turkey. Results indicated that students found EAP courses effective in enabling them to improve their academic skills, academic language and content knowledge, and provide them with personal benefits. However, students expressed their dissatisfaction with EAP course designs and their improvement level of speaking, vocabulary, reading and writing. EMI students suggest that an ideal EAP course should be conducted 2 or 3 hours a week either by faculty members or English instructors. The expectations that EMI students mentioned in this study point at the need for a skills-based EAP course design for which they also pinpointed several essential sub-skills to be covered. The study concludes with a discussion of challenges encountered by EMI students and some recommendations for the improvement of EAP courses.*

Key words: *English medium instruction, English for academic purposes, course design, skills-based activities*

1. INTRODUCTION

English for Academic Purposes (EAP) is defined as a variety of English for specific purposes (ESP) which refers to "language research and instruction that focuses on the specific communicative needs and practices of particular social groups" (Hyland 2007, 391). EAP is treated as a 'sub-discipline of ESP' in that it relates to social groups within academic pursuit (Hamp-Lyons 2011, 89) and can be defined as 'the teaching of English with the specific aim of helping learners to study, conduct research in English' (Flowerdew and Peacock 2001, 8). EAP research maintains its strong position around the world thanks to the increasing internationalization of higher education (HE) which have brought with it the concept of English medium instruction (EMI) where learners take their education in English rather than the first language of the home country (Chapple 2015; Dearden 2015). Especially in developing and developed countries, EMI is being

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promoted for several benefits it offers: attracting international learners to study in the same environment (Doiz, Lasagabaster, and Sierra 2013; Baker and Fang 2021); enabling learners to function in the global market upon graduation (Wilkinson 2012) and raising students' career expectations (Başıbek et al. 2014); and maximizing learners' exposure to English (Graham-Marr 2017; Yang 2015) as the use of English takes place in an authentic environment (Anthony 2018). With all these advantages, EMI appears to be a nascent concept evidently penetrating into Turkish HE system (Aslan 2018; Selvi 2014) where there are alternative approaches to the language of instruction: a) solely Turkish education; b) mixed-medium education in Turkish and English (at least 30% in English); c) EMI (Macaro and Akincioglu 2018), which will be the option on the upswing for the coming years (Dearden 2015; Aslan 2018).

1.1. EAP for EMI Students

Among a range of factors to influence EMI trend, language proficiency of HE students is the most commonly discussed issue as it plays a pivotal role in the implementation and the quality of EMI (Bradford 2016). Though the boundaries of sufficient level of language proficiency are blurred, existing research suggests that language proficiency of students to embark on EMI context is decisive in the quality of education as well as the amount students benefit from EMI (Aizawa & Rose, 2020; Bradford 2016; Chapple 2015; Doiz, Lasagabaster, and Sierra 2013; Evans and Green 2007). Though many -including students- share the expectation that EMI would improve students' language proficiency (Chapple 2015; Doiz, Lasagabaster, and Sierra 2013; Kirkpatrick 2014), there are no clear guidelines about how to achieve this kind of improvement. Still, it is safe to assume that in order to achieve their full potential in EMI contexts, students need specialized language support tailored to their academic needs in their majors (Chapple 2015, 5; Chang, Kim, and Lee 2017).

In order to provide this academic language support, generally EAP courses are integrated into EMI programs, though the design and content of these courses do not follow a standard approach (Dooey 2010). In the UK, EAP courses are initially planned as pre-sessional intensive courses prior to students' departmental studies to ensure that they start regular semesters as equipped with fundamental academic-study skills such as note-taking in academic reading and listening (Strong 2019, 4). In Japan, EAP courses in EMI programs are optional for freshmen and they provide a basic academic skills repertoire, mostly decided by course teachers in charge (Fujimato-Adamson and Adamson 2018). In Australia, for equipping students for EMI programs, a growing practice is to give them a one-semester compulsory course named English Language Bridging Course, which prepares them for academic studies and acts as the gatekeeper for students to start tertiary study. EMI practices in Turkey also act in line with the assumption that students need academic language support and many EMI programs offer EAP courses along with other content courses. However, EAP practices in the Turkish context significantly differ from each other (Demir 2015; Kamasak, Sahan, and Rose 2021; Kırkgoz 2009; Saglam and Duman 2020; Yurekli 2012), which holds true also for the sampling of this study, as can be appreciated from Appendix 1.

Kırkgoz (2009) conducted one of the earliest studies on EAP courses offered in the Turkish HE. The researcher investigated the effectiveness of a one-year EAP course from the lens of first-year students enrolled in EMI programs along with the evaluation of

faculty. Kırkgoz reported that most of the students found that EAP course ineffective in preparing them to meet the demands of academic tasks at their departments, an observation also confirmed by the lecturers interviewed. The researcher, who attributed the inadequacy of that EAP course to the skill-integrated curriculum that addressed language skills only superficially, suggested adding a deep focus into standard EAP courses so that learners could get familiar with question types, text types and vocabulary special to their majors.

Yurekli (2012) described the evaluation of an EAP course content offered to students enrolled in programs of Computer Sciences Faculty. The researcher conducted a needs analysis survey and held interviews with faculty. The findings of the study were encouraging in that students expressed their satisfaction with the content of the EAP course that addressed their academic reading and writing skills thoroughly. However, they expressed their concern about speaking and listening as underdeveloped areas. As such, Yurekli made a call for developing comprehensive EAP courses targeting each major language skill rather than with a limited focus on one or two specific skills.

Demir (2015) explored the needs of university students and academics in relation to a specific EAP course titled Professional Communication Skills. Different from Yurekli's (2012) study, this EAP course targeted the improvement of all language skills. Though the academics and a significant majority of the students reported that the EAP course contributed to their development, there were criticisms targeted at the unbalanced importance attached to different language skills, where speaking and writing were reported to be not receiving sufficient attention.

Another study on EAP courses targeting a specific skill was conducted by Gokturk Saglam and Yalcin Duman (2020) who explored the effectiveness of an EAP course offered to Turkish university students to improve their academic reading and writing skills. The researcher narrowed the study's focus on the participants' perceptions of the effectiveness of source-based writing tasks where they produced academic written tasks in relation to the academic texts they read. The study suggested that provision of academic reading texts enhanced the participants' satisfaction of the quality of arguments they produced in their writings. Additionally, they reported utilizing those reading texts as sources modelling linguistic use.

Aforementioned studies show that though the focus of EAP courses offered in different contexts may change considerably, they all imply that EAP courses should be academic-oriented and each language skill requires special attention in the course design. This study will contribute to the existing literature by adopting a learner-centred approach. It aims to investigate both how useful EMI students find EAP courses for their subject courses and what are the ideal design features of an EAP course from EMI students' perspectives, which is an area that has not been addressed in the Turkish context.

2. METHOD

This study aimed to understand whether EMI students considered their current EAP courses to be helpful in promoting their academic achievement and to unearth their ideas about the qualities of an ideal EAP course. An EAP course in this study refers to any specifically designed course providing academic-oriented language support for HE students as a component of their departmental curriculum. To balance the possible

limitations of quantitative and qualitative methods, we used mixed methods study design (Bryman 2006). We specifically preferred to use the convergent parallel design and collected both quantitative and qualitative data synchronously.

2.1. Data Collection

2.1.1. Quantitative Data

Our quantitative data came from undergraduate students from three different Turkish EMI universities (University A, B and C). Data were collected from 563 students chosen by convenience sampling in the spring of 2019. 56.5% (318) of study participants were female, and 43.5% (245) were male. Their ages ranged from 17-20 (56.7%) to 21-24 (40.1%). Only 3.2% of them were at the age of 25 and above. Most students were freshmen (380; 67.5%), followed by second graders (153; 27.2%) and third graders (26; 4.6%). Only four students (0.7%) were seniors. Students were enrolled at five different faculties; education (185; 32.9%), business administration (106; 18.8%), engineering (97; 17.2%), arts and sciences (76; 13.5%), economics and administrative sciences (64; 11.4%). 35 students (6.2%) did not specify which faculty they were registered for.

This research study conducted by three researchers lasted for approximately one year to complete. Having received ethical permission for the study, we contacted the deans asking them for help in distributing surveys. With the lecturers' permission, we handed out the surveys and collected them at the end of the class. We went through the same procedure in each university, visiting nearly 70 classes with an average number of 25 students. The survey response rate was approximately 30%.

The questionnaire in this study was developed by the researchers based on the current literature discussing EAP courses in EMI settings (Demir 2015; Yurekli 2012). It was made up of 2 parts and 8 questions. In the first part, students were asked to provide demographic information. The second part included yes-no questions and questions seeking student responses on a 5-point Likert scale. The validity of the survey was ensured through expert opinion (three faculties; one with a PhD in ELT, one in testing and measurement, one in Turkish language, and one in curriculum and instruction) and a pilot study with 12 students. We used frequency count and percentages to analyze research data.

2.1.2. Qualitative Data

To address our first research question, we collected qualitative data from 332 students indicating that they were currently taking EAP courses. They were asked two open-ended questions to specify in what aspects they found these courses helpful / unhelpful. To address the second research question, qualitative data from 450 students were collected. They were asked to fill in a table to share their suggestions for potential activities to be included in EAP courses. Students' responses were entered into an excel sheet and shared with the researchers. In analyzing qualitative data, we used both deductive and inductive coding techniques (Miles et al. 2014) and went through three stages. First, the nature of the questions enabled us to categorize data under three distinct headings (helpful, unhelpful, potential activities for different skills). Each researcher read through data under these heading, then came together and devised a coding scheme based on their first impressions about the emergent themes. Second, data were coded individually under the emerging themes, new themes were added if necessary. In order to explore to what extent we agreed upon the codes, we analyzed them

before reaching a conclusion (Tinsley and Weiss 2000). As soon as the final themes were agreed upon, we calculated the frequency of themes.

2.2. EAP Courses in Research Context

Information obtained from the websites of three universities under investigation about their EAP curricula revealed that A University offers Foreign Language, English for Academic Purposes (Listening & Speaking), and Academic Writing courses. B University has English for Academic Purposes, Academic Writing and Professional Communication in English, and C University provides English for Specific Purposes, Academic Presentation Skills, and Academic Writing Skills courses to freshmen and sophomores (See Appendix 1). While all EAP courses are delivered by language teachers, EAP curricula considerably vary in their course descriptions, weekly contact hours, teaching and learning activities, and assessment methods.

The curricula of A and B universities include English for Academic Purposes courses, where students in A University are trained in rhetoric, pronunciation and public speaking, while students in B university are trained in reading, writing, and delivering academic presentations. All three universities provide an Academic Writing Course, commonly weighted towards the teaching of academic essays besides the skills of paraphrasing, summarizing, referencing and avoiding plagiarism. A University has a general English course, Foreign Language, and B University has a course called Professional Communication in English, aiming to develop students' communication, problem-solving and professional skills in business. Whether Professional Communication in English course offers a generic or a discipline-specific language training is not stated in the course description. Besides Academic Writing and Academic Presentation Skills, EMI students in C University are offered an English for Specific Purposes course, giving a discipline-specific language training in the fields of Aviation, Management and Engineering.

Regarding the contact hours, A University has 2, B University 3, and C University has 4 weekly hours for 28 weeks in one academic year. The courses are offered for the first and second graders, but no information is provided whether third and fourth graders can or must take any EAP course before graduation. Activities and teaching methods in EAP courses also vary among universities. While A and B University use telling, explaining, discussion, debate, reading, scaffolding, coaching, inquiry, collaborating, think-pair-share, (video) presentations, brainstorming, hands-on activities, and web-searching, C University appears to implement in-class activities, mini presentations, and projects in its curriculum. With regard to their assessment methods, all three universities apply both traditional and alternative methods. Since all information related to research context is limited to what was retrieved from webpages, we are not able to report how course content, teaching activities, delivery and assessment methods are determined, by whom the decisions are made and whether any of these courses are designed based on needs-assessment.

3. RESULTS

3.1. To what extent do students at EMI universities find EAP courses helpful in increasing their academic performance?

We found out that 332 (59%) of the students were currently taking EAP courses as opposed to 231 (41%) who indicated that they were not doing so. Our analysis of the responses of the students taking EAP courses yielded the results displayed in Table 1 in regard to how useful they found these courses in increasing their academic performance.

Table 1 Perceived helpfulness of EAP courses

	f	%
Very helpful	69	21.0
Helpful	146	44.4
Moderately helpful	74	22.5
Slightly helpful	30	9.1
Not helpful at all	10	3.0
Total	329	100

As indicated in Table 1, 65.4% of the students found EAP courses very helpful (21%) or helpful (44.4%) in increasing their academic performance. 22.5% of the students reported they considered such courses to be moderately helpful. Only a minority of the students indicated EAP courses were slightly helpful (9.1%) or not helpful at all (3%).

We also asked the students not taking EAP courses at the time of the study (n:231) to indicate whether they thought taking EAP courses would benefit them. We found out 64.9% of them responded “yes”, 16% said “no” and 19% did not respond.

The results of our analysis of why EAP courses were found useful by research participants are listed in Table 2.

Table 2 Reasons why EMI students find EAP courses helpful

Themes		f	%
Improvement in academic skills	Writing	106	25.6
	Speaking	63	15.2
	Presentation	29	7.0
	Reading	20	4.8
	Listening	15	3.6
	Critical thinking	3	0.7
	How to research academic sources	3	0.7
Improvement in academic language and content knowledge	Knowledge of terminology	60	14.5
	General academic proficiency	55	13.3
	Familiarity with field specific knowledge	16	3.9
	Awareness about academic resources	6	1.4
	Advanced grammar for academic English	5	1.2
Personal benefits	Improving self-confidence	22	5.3
	Preparation for future career	11	2.7
Total		414	100

EMI students (n:414) think EAP courses enable them to improve their academic skills in writing (106; 25,6%), speaking (63;15,2%), presentation (29;7%), reading (20;4,8%), listening (15;3,6%), critical thinking (3;0,7%) and how to research academic sources (3;0.7%).

EAP courses are perceived to improve students' academic language and content knowledge by increasing their knowledge of terminology (60;14.5%), general academic proficiency (55;13.3%), familiarity with field specific knowledge (16;3.9%), awareness about academic resources (6;1.4%), advanced grammar for academic English (5;1.2%). EMI students also reported EAP courses provided them with personal benefits such as improving their self-confidence (22;5.3%) and preparing them for their future careers (11;2.7%).

Students' open-ended responses to the question asking why they found EMI courses unhelpful yielded the results presented in Table 3.

Table 3 Reasons why EMI students find EAP courses unhelpful

Themes		f	%
Dissatisfaction with course design	Content	63	44.4
	Course requirements	13	9.2
	Course hours	11	7.7
	Instructor	8	5.6
	Coursebook	4	2.8
Dissatisfaction with skills improvement	Speaking	14	9.9
	Vocabulary	8	5.6
	Reading	8	5.6
	Writing	8	5.6
	Listening	5	3.5
Total		142	100

EMI students indicated they were dissatisfied with the way EAP courses were designed in terms of course content (63;44.4%), requirements (13;9.2%), contact hours (11;7.7%), instructors (8;5.6%), and coursebooks (4;2.8%). EMI students also reported they were not content with the improvement they witnessed in speaking (14;9.9%), vocabulary (8;5.6%), reading (8;5.6%), writing (8;5.6%) and listening (5;3.5%) skills.

3.2. What do students at EMI universities think that an ideal EAP course should be like?

EMI students' views about an ideal EAP course in terms of its weekly contact hours and the instructors to offer such courses can be found in Table 4 and 5. Majority of the participants (271; 51.6%) think an EAP course should last for 2 hours a week, followed by those who think it should be conducted 3 hours a week (161; 30.7%). The percentage of students who think EAP courses should be offered by English instructors (285; 53.3%) is roughly equal to those who believe these courses should be offered by faculty (250; 46.7%).

Table 4 Suggested weekly contact hours for EAP courses

	f	%
1 hour	18	3.4
2 hours	271	51.6
3 hours	161	30.7
4 hours	34	6.5
5-6 hours	35	6.7
7-8 hours	6	1.1
Total	525	100

Table 5 Suggested instructors for EAP courses

	f	%
Faculty from department	250	46.7
English instructors	285	53.3
Total	535	100

We also sought to determine the type of the skill-based learning activities participants thought an EAP course should include. It is worth mentioning here that a range of skill-based learning activities have been identified in the students' responses to the questionnaire. Considering that 80 % of the students received pre-faculty preparatory language education, the students appeared to be quite aware of the tasks that can contribute to their English proficiency.

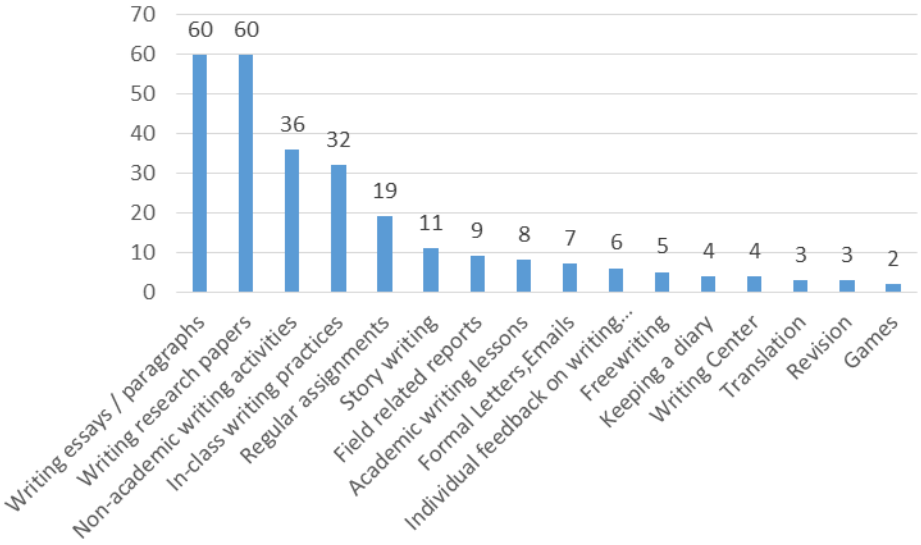

Fig. 1 Suggested writing activities

In Figure 1, we can clearly see the activities mostly suggested by students are writing essays or paragraphs (60;22.3%), research papers (60;22.3%), informal writing activities

(36;13.4%), and in-class writing practices (32;11.9%). However, activities least recommended are games (2;0.7%), revision (3;1.1%), and translation (3;1.1%).

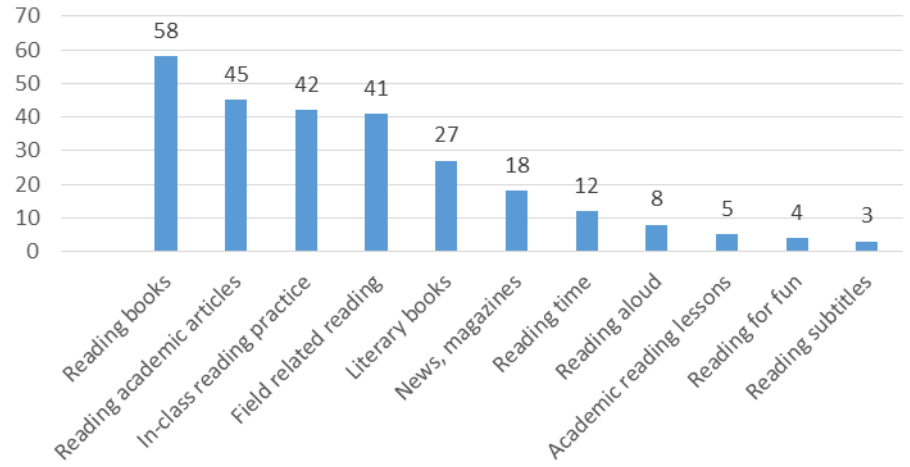

Fig. 2 Suggested reading activities

Figure 2 shows suggested reading activities. First three mostly recommended activities are reading books (58;21.9%), academic articles (45;17%), and in-class reading practice (42;15.8%). On the other hand, least frequently suggested activities are games (2;0.8%), reading subtitles (3;1.1%), and essays (3;1.1%).

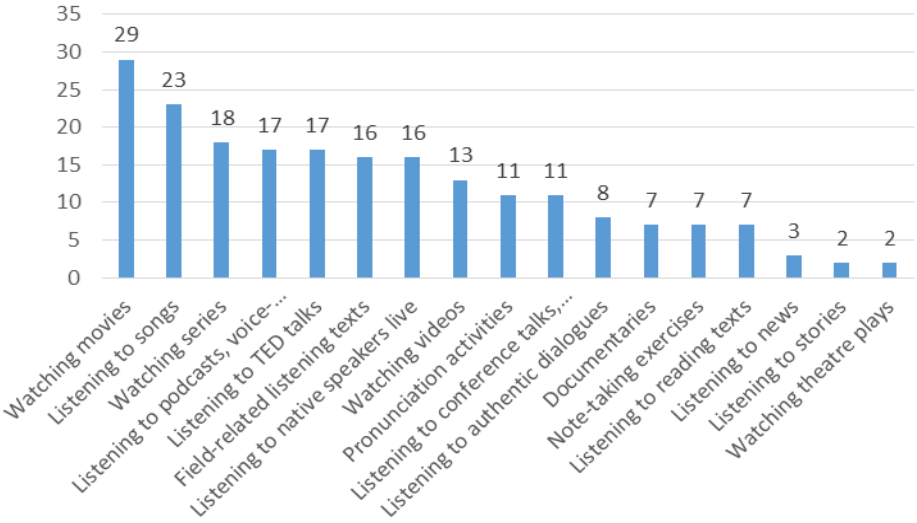

Fig. 3 Suggested listening activities

As for listening skill, we can see in Figure 3 that EMI students suggested that EAP courses should include listening activities such as watching movies (29;14%), listening to songs (23;11.1%), and watching series (18;8.7%). Among the least frequently recommended activities are watching theatre plays (2;1%), listening to stories (2;1%) and news (3;1.4%).

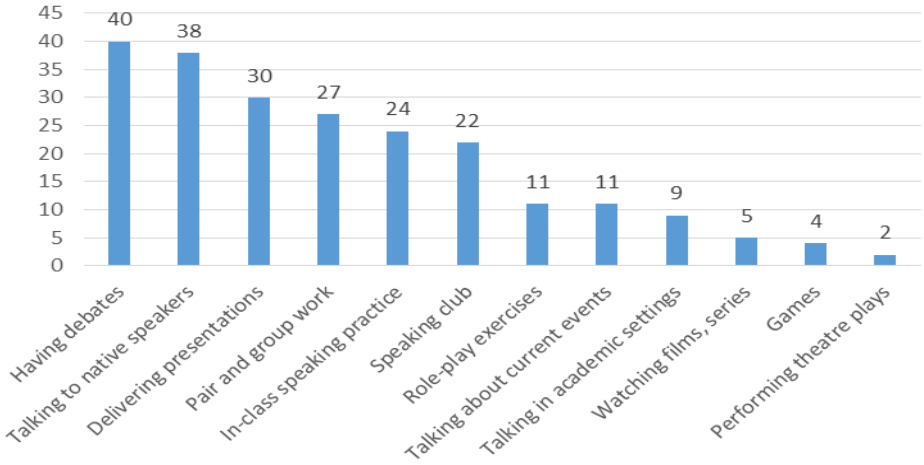

Fig. 4 Suggested speaking activities

In Figure 4, we present the recommended speaking activities. Most suggested activity is having debates (40;17.9%), followed by talking to native speakers (38;17%), and delivering presentations (30;13.5%) respectively. Performing theatre plays (2;0.9%), games (4;1.8%) and watching films or series (5;2.2%) are the least suggested.

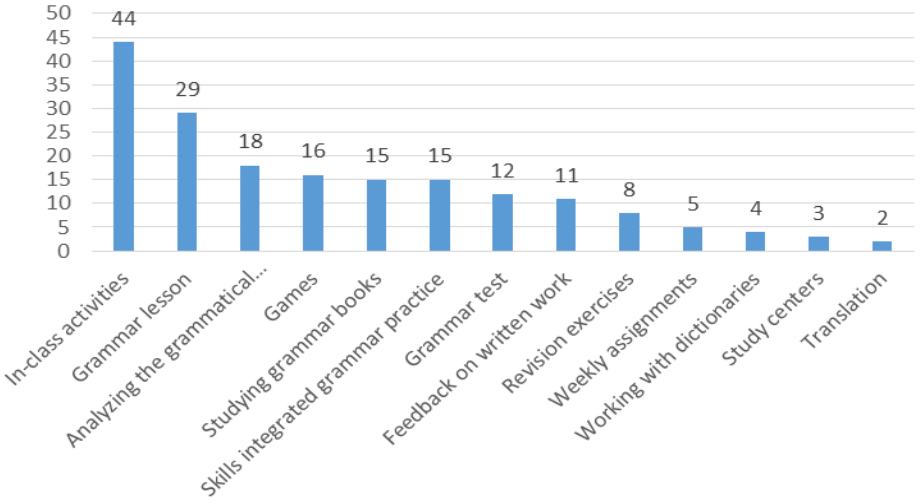

Fig. 5 Suggested grammar activities

With regard to grammar activities, we can see in Figure 5 that grammar activities mostly suggested by EMI students are in-class activities (44;30.6%), grammar lesson (29;20.1%), and analyzing the grammatical structures in articles (18;12.5%). Least suggested activities are translation (2;1.4%), study centers (3;2.1%) and working with dictionaries (4;2.8%).

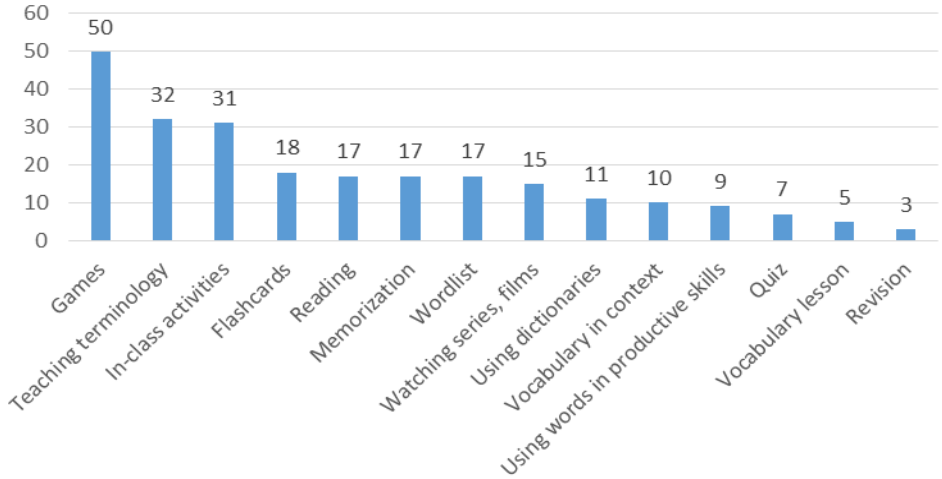

Fig. 6 Suggested vocabulary activities

Figure 6 shows the types of suggested vocabulary activities. Participants indicated they should learn new words through games (50;20.7%), teaching terminology (32;13.2%), and in-class activities (31;12.8%). However, revision (3;1.2%), teaching words with visuals (5;2.1%) and having a separate vocabulary lesson (5;2.1%) come last in the list.

It should be highlighted that the majority of the participants in this study attended a one-year compulsory preparatory English language program, and could relate this unique experience with their undergraduate studies and refer back to it if they deemed it necessary. Considering that the study was undertaken in an EMI setting, participants could forge a natural and experiential link between their majors and the type of activities that need to be integrated into an EAP curriculum.

4. Discussion

This study researched to what extent students at three EMI universities found EAP courses helpful in increasing their academic performance and how they described an ideal EAP course in EMI contexts. Findings revealed EAP courses were found by the majority of the students effective in supporting their academic performance. Students found EAP courses most helpful in developing writing skills, followed by speaking and presentation skills. This might be due to Academic Writing Skills and Academic Presentation Skills courses freshmen and sophomores attended at universities under investigation. Although it was not validated by examination or GPA scores, students might have developed competence in productive skills thanks to such courses. Since writing (e.g. Breeze and Dafaouz 2017; Evans and Morrison 2011; Kamasak et al. 2021; Lee and Lee 2018; Tomak

and Ataş 2019) and speaking (e.g. Aizawa and Rose 2020; Chang 2010; Evans and Morrison 2011; Kamasak et al. 2021; Oner and Mede 2015) were reportedly found the most challenging areas for students in many EMI settings; our findings might suggest a skills-based program helped students cope with difficulties in writing and speaking. This differs from Kırkgöz (2009) revealing that a skills-based EAP curriculum was inadequate in supporting students' academic improvement. These variations might be either contextual (Aizawa and Rose 2020) or disciplinary (Airey et al. 2017). Further investigation into students' disciplines, language proficiencies and exam scores in our context is needed for in-depth discussion about perceived improvement in writing and speaking.

Students acknowledged reading, listening, critical thinking and researching academic resources as relatively less supported skills, which corroborates previous studies (e.g. Airey and Linder 2006; Bradford 2018; Chan 2015; Spirovska 2020; Uchihara and Harada 2018) confirming receptive skills in EAP courses created barriers to students' academic improvement. Since receptive skills are highly essential for the comprehension of academic content, it would be hard to expect from students to recognize facts and claims, analyze arguments and make inferences about their academic disciplines with limited comprehension in reading and listening. Thus, the finding related to the perceived less improvement in critical thinking is not surprising since comprehension is a critical thinking act (Aloqaili 2011; Norris and Philips 1987). The same might be true for less improvement in researching academic resources because distinguishing between relevant and irrelevant academic sources or determining their reliability require the skills of comprehension and critical thinking.

Most students reported gains in subject-specific terminology and general academic proficiency; however, the findings highlighted a need to provide more opportunities for acquiring familiarity with field-specific knowledge, academic resources and learning advanced grammar. Some students reported their expectation of more explicit instruction in content and linguistic knowledge or feeling relatively less improved in these skills. We might associate this with a discussion about a dual loss in EMI contexts (Hamid et al. 2013). Dual loss in our context might have emerged from students' low language proficiency, quality of academic content, or challenges lecturers face while delivering disciplinary courses through EMI. These seem to validate the previous studies (e.g. Lei and Hu 2014; Yang 2015) where EMI students were found to suffer from little development in both academic content and language skills. Regarding the finding on advanced grammar, we could question whether general English courses or English preparatory programs (EPP) could prepare students sufficiently for disciplinary courses where academic English is required (Chang 2010). This may underline the need in EMI for additional language support programs, designed as either a curricular or an extracurricular activity, where students are provided with "systematic" and "ongoing" language courses related to their disciplines (Kirkpatrick 2014, 7).

Another finding is related to students' lack of awareness of academic sources and how to research them. Students, lacking necessary skills in finding appropriate academic sources, might be expecting either a language instructor or a faculty to guide them through their academic studies. Thus, offering high quality academic advising where students' academic needs are responded to and they are assisted by their advisors or mentors in being more autonomous (McGill, Ali and Barton 2020) in doing research is crucial.

Findings yielded satisfactory results regarding students' perceptions of improved self-confidence and preparation for future careers. Providing better employment opportunities for

students at local and international level is regarded as a driving force behind EMI at HE (Aizawa and Rose 2020; Bozdoğan and Karlıdağ 2013; Selvi 2014). EAP courses in this study seem to be consistent with this instrumental advantage.

Considering students who found EAP courses little helpful, findings indicated speaking as the least improved skill, followed by vocabulary, reading, writing and listening. Previous studies from different EMI settings reported identical results regarding the significance of speaking as well as vocabulary (e.g. Jiang et al. 2019; Kamasak et al. 2021) and suggested a provision of more practice in speaking besides more exposure to subject-specific terminology (Chang 2010; Evans and Green 2007; Kamasak et al. 2021). We believe a "meaningful integration of skills" in EAP curricula can help receptive and productive skills reinforce each other and assist students in getting prepared for academic studies (Caplan 2016, 29). EMI universities can provide assistance to students for the improvement of language skills via academic and language support services.

Results of the study further revealed students' expectations of EAP courses related to the content, course requirements, contact hours, instructors and course books. Students' suggestions can give us an insight into the development of learner-centered EAP curricula, although we are aware that each EMI setting is unique (Aizawa and Rose 2020; Chen et al. 2020). Many students suggested 2-3 contact hours per week. This appears to fit the weekly hours most Turkish EMI universities currently allocate for EAP courses. Regarding course delivery, results demonstrated half the students wanted an English instructor, while the other half expected faculty to deliver EAP courses. In our view, EMI students here stressed the importance of language teachers' and faculty's being proficient in both content and linguistic knowledge. EMI does not primarily focus on language enhancement (Aizawa and Rose 2020), yet students explicitly need adequate language proficiency to acquire and display disciplinary knowledge (Kırkgöz 2014; Vukićević Đorđević, 2019; Wong and Wu 2011). This might indicate some students found their language teachers inadequate in the teaching of content while some others perceived content teachers had language proficiency problems. This requires further inquiry. In either case, we call for an enhanced communication and collaboration between language and content teachers who will ideally work together to address both disciplinary and language needs of EMI students (Dearden, Macaro and Akincioglu 2016; Jiang et al. 2019).

EMI students wanted writing tasks to be carried out in the form of essay writing . Additionally, students seemed to seek further opportunities where they could learn academic content by writing research papers. In general, intensive Turkish EPP programs provide students with training in writing about general topics rather than academic subjects, but research findings by Yildiz, Soruç and Griffits (2017) revealed a need for writing about academic subjects in EPP programs. So incorporating academic writing into EPP curricula could be considered to provide early support before taking disciplinary courses.

Students mostly proposed reading books, reading academic articles and in-class reading practice. Actually, it is surprising to see that reading books was preferred most in this category. To interpret what students meant by reading books, whether on general or academic topics, we demand further investigation. However, expecting an EAP course to provide an in-class reading practice might provide evidence for students' lack of overall reading habits. Earlier, we mentioned students' feeling less improved in receptive skills, which we can also associate with poor reading habits. This can also be supported by PISA (2018) results indicating Turkish students scored lower than the OECD average in reading. We see that reading is a major problem both in native and target language. We

further found students placed emphasis on reading academic articles in courses. With more opportunities to read academic sources with subject-specific terminology, students might acquire competence in content and language knowledge as suggested by Göktürk Sağlam and Yalçın Duman (2020).

We found watching movies, listening to songs, and watching series were highly favorable listening activities. Listening was identified as an area where students felt less academic improvement. We could hardly associate their suggestions with academic listening. Instead, they sounded more like non-academic extracurricular activities organized by EPP programs. This might be attributed to students' inadequate knowledge about academic listening. The same confusion might be true for EAP courses. After completing EPP, students might regard EAP courses as the continuation of general English courses where they thought of implementing similar curricular and extracurricular activities to advance their general linguistic skills. If this were the case, students might be offered orientation programs where they are introduced to EAP courses' content, objectives, method of delivery and forms of assessment.

Mostly suggested speaking activities were debates, talking to native speakers, and delivering presentations. Results demonstrated speaking was highlighted by the majority of the students for their academic improvement, both by those who found EAP courses helpful and those who did not. Therefore, it is essential to address the needs of students in speaking by providing ample opportunity for the active use of academic language in classes through interactive teaching methods.

In-class activities, grammar lessons, and analyzing the grammatical structures in articles were mostly preferred grammar activities. It is interesting to see students wanted explicit grammar teaching in EAP. This gave us the impression that lessons they took in EPP failed to provide them with an appropriate level of grammar knowledge to understand academic articles. Thus, a need for extra linguistic support to EMI students could be underlined as similarly emphasized by other studies (Aizawa and Rose 2020; Kamasak et al. 2021; Galloway and Rueg 2020). Students also suggested learning terminology or subject-specific vocabulary through games and in-class activities. This might imply their expectation to have more fun and active learning opportunities to understand academic content.

5. Conclusion and Implications

Regardless of their perceived academic improvement, EMI students in our context experienced linguistic challenges (e.g listening, reading, grammar, speaking, and vocabulary) preventing them from learning academic content successfully. Although all EMI students, with low English proficiency, attend a compulsory EPP program prior to their departmental study in Turkey, the curricula of EPPs might not lend strong support to EMI students for a smooth transition to disciplinary courses (British Council 2015) and successful following of the course content during initial years of academic studies. This might result from students' entry and exit proficiency levels, duration and content of the program, and a lack of an agreed language proficiency standard among EMI universities. Since students enroll in EMI universities with varying proficiency levels, EPP may fall behind equipping them with required skills in using academic language within a limited time. This might apply more to those who begin EPP with A1 level of English. This group of students might need to attend a compulsory additional year of EPP to be

proficient enough to study academic content in English. However, in accordance with regulations by Turkish HE Council, students having failed in EPP in the first year are allowed to improve their language proficiency with their own means, which leads failed students to stop regularly attending EPP courses and not improving their language adequately. Here, we suggest all EPP programs, regardless of students' academic disciplines, offering primarily general English courses in the first semester. In the second semester, depending on students' disciplines, EPP programs may add their curricula English for specific purposes (ESP) as well as EAP courses where students with higher proficiency levels could begin receiving training in subject-specific and academic language skills. For lower proficiency students, we suggest completing general English courses in the first year, and a provision of ESP and EAP content in the first semester of the second compulsory year in EPP programs. Thus, we recommend a thorough revision of EPP regarding its entry and exit standards, its duration and content by curriculum specialists, and other stakeholders in HE in order to qualify students better for academic programs. Linguistic support should not terminate upon the completion of EPP. During academic programs, elective language courses or extracurricular programs especially for students in demand for language support might be good alternatives to reinforce language skills and assist in understanding of academic content (British Council Report, 2015).

Findings underline the importance of academic advising. Students have little awareness of which academic sources to read, where to find them and how to select relevant ones. We believe academic advisors are the primary resources for learning. Their support should not be restricted to course registration at semester beginnings but consists of informing, suggesting, counselling, coaching, mentoring, and teaching. With their guidance, advisors should be able to provide students with a vision about all academic, social, and individual topics (Kuhn 2008). Thus, besides content teachers, academic advisors should take responsibility for helping students achieve their academic goals by gaining the skills of reaching the right sources, conducting research and writing research papers. Another suggestion is related to students' emphasis on writing essays and research papers. Due to time concerns in EAP courses, both language and content teachers might have difficulties in completing the program and providing one-to-one support to students. In this case, academic writing centers could be established. In these centers, each student can receive assistance regarding their immediate needs from a language teacher or an academician. Similar academic services could be provided for the improvement of speaking skills where students can interact with native speakers, watch movies, and do presentations which may support their language and content advancement.

We could understand students did not have a common idea of what EAP courses should offer and include. This was evidenced well by their responses regarding the content of an ideal EAP course. While some wanted explicit grammar teaching, and book reading, some others wanted to watch films, and do presentations. This confusion might emerge from EMI universities' own lack of established standards in terms of objectives, content, delivery, and assessment of programs. For quality assurance and sustainability, however, EMI universities should seek ways to agree on common standards for EAP courses. Their duration, content, delivery and assessment methods might be discussed in common platforms with more interaction and dialogue between language teachers and faculty, EPP and undergraduate programs representatives, and curriculum specialists of different EMI universities and university administrators with consideration of local needs. Speaking of quality and sustainability, we also suggest adopting a learner-centered

approach in which all components of EAP courses are aligned with students' needs (Anthony 2018). Offering continuous professional development opportunities for both language and content teachers is also essential. After a thorough needs analysis, training programs for EMI academic staff on lesson planning, teaching, classroom management, and collaborative working skills can be organized. These can be in the form of in-house programs or arranged with the collaboration of EMI universities, which can help create professional learning networks among EMI professionals.

Main limitation in this study is about data collection procedures. First, data for the study were collected from three Turkish EMI universities and from relatively a small number of students. Second, participants consisted mostly of first and second year students. Thus, it would be wrong to generalize findings to the perceptions of a wider population in either these universities or other EMI settings. Additionally, more qualitative data could be collected via focus group interviews with students from all grades in order to gain better understanding of the research inquiry. Lastly, consulting EAP teachers and faculty about their perceptions of EAP courses would enrich data. Therefore, further studies, which involve language and content teachers' opinions, can provide a comprehensive picture of EAP courses in Turkey and their expected design features.

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COMPRESSED AND IMPLICIT SYNTACTIC FEATURES OF L2 ENGLISH ACADEMIC RESEARCH WRITING BY FILIPINO RESEARCH WRITERS ACROSS DISCIPLINES: A CROSS-ANALYSIS

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Abstract. *Compressed and implicit nominal phrases as syntactic features of academic writing (Biber & Gray, 2010, 2016) are underexplored in L2 academic research writing. In this study, I cross-examined attributive adjectives, nominal prepositional phrases, noun premodifiers, and appositive nouns phrases in qualitative and quantitative research articles (RAs) authored by Filipino research writers (FRWs) across Applied Linguistics, Measurement and Evaluation, and Sociology, using Biber, Johansson et al.'s (1999, 2021) framework. Major results revealed that attributive adjectives, nominal prepositional phrases, and noun premodifiers extremely co-occurred across the disciplinary RA sub-registers. A significant difference exists between the three nominal phrases and appositive noun phrases. Nonetheless, their frequencies of use also differed in RA sub-registers across disciplines. In conclusion, the three leading embedded phrasal modifiers are universal and the most functional compressed and implicit syntactic features of the five disciplinary RA sub-registers. FRWs employ the three nominal phrases as they are much more flexible than appositive noun phrases. Overall, they characterize L2 academic research writing and make it a highly nominal academic written discourse regardless of its disciplinary origin and research nature. In line with these, the study's implications for academic writing pedagogy are emphasized.*

Key words: *compressed and implicit syntactic features, disciplinary research articles, Filipino research writers, L2 English academic research writing, nominal phrases*

1. INTRODUCTION

Academic research writing has been proven to be characterized by compressed and implicit syntactic features (Ansarifar, et al., 2018; Biber & Gray, 2010, 2016; Ruan, 2018; Wu et al., 2020), contrary to the stereotype that academic writing is elaborated and explicit. Compression is an academic discourse style to convey dense information in few words possible, bringing about implicitness of meaning or logical relations between the pre- and/or postmodifier and the head noun (Biber & Gray, 2016). In academic research writing, compression and implicitness are associated commonly with four phrasal

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modifiers–attributive adjectives, noun premodifiers (as premodifiers), nominal prepositional phrases, and appositive noun phrases (as postmodifiers) (Biber, Johansson, et al., 1999, 2021). These modifiers are embedded syntactic constituents of nouns, creating very dense packaging of information (Biber & Gray, 2010, 2016).

On the one hand, current research on compressed and implicit syntactic features has focused more on L1 English research writers (e.g., Al Fajri & Okwar, 2020; Biber & Gray, 2016; Biber, Gray et al., 2016; Cho & Lee, 2016; Gray, 2015; Hyland & Jiang, 2017; Kim & Crosthwaite, 2019; Lu et al., 2020). On the other hand, a scarcity of studies concentrating on L2 English research writers exists (e.g., Ruan, 2018; Wu et al., 2020; Yin et al., 2021). L2 English research writers include English users who use English as a second/foreign language (ESL/EFL) or English as a lingua franca (ELF) in writing academic research. As one of the L2 English research writers, Filipino research writers (FRWs) across disciplines employ compressed and implicit syntactic features (Hernandez, 2021); however, their use of these nominal phrases has been hardly explored in academic writing research. This gap indicates that the four nominal pre- and postmodifiers are underexplored compressed and implicit syntactic features in L2 English academic research writing especially in the Philippines.

Analyzing the compressed and implicit syntactic features in L2 English academic research writing is important because they benefit FRWs and other L2 English research writers to communicate with economy of expression, which is an important quality of academic research writing (Biber & Gray, 2010, 2016). Equally important, examining the four syntactic features has applied implications for academic writing pedagogy in the Philippines and other nations across the world where English is used as an L2. Therefore, this study cross-analyzes attributive adjectives, nominal prepositional phrases, noun premodifiers, and appositive noun phrases in L2 English academic research writing by FRWs across Applied Linguistics (AL), Measurement and Evaluation (ME), and Sociology (SOC).

2. Literature Review

2.1. English as the language of academic research

English is the universal language of research in contexts where English is used as an L1 or L2. Research scholars use it to disseminate scientific knowledge across disciplinary discourse communities and nations (Flowerdew, 2013; Lillis & Curry, 2016; Menghini, 2017; Paltridge, 2013). In fact, most of the scholarly publications are written in English. On the one hand, 95% of research (indexed in International Scientific Indexing [ISI]) in natural sciences are published in English; 90% of research (indexed in ISI) in social sciences are also published in English (Flowerdew, 2013; Lillis & Curry, 2010). On the other hand, 67% of research (indexed in Ulrich's Periodicals Directory) is published in English (Flowerdew, 2013; Lillis & Curry, 2010). Despite these figures, it cannot be claimed that these studies were written by L1 English users only because the number of L2 English users has exceeded the number of L1 English users across the world (Crystal, 2003, 2008; Jenkins, 2015). With this claim, I argue that academic research writing is largely populated by L2 English research writers like FRWs.

In 1899, English was entrenched in the Philippines when the Thomasites (first American teachers of Filipinos) taught Filipinos about the language. After their short stay in the country, Filipino teachers took over them and began teaching English to Filipinos.

At present, Filipinos use English as their L2 in various language domains (e.g., education, business, science) and different communication contexts. For example, they use English as the institutional language in writing and publishing academic research (Dayag, 2012, 2014). Philippine state universities and colleges require their graduate and undergraduate students to write research in English to earn academic units and complete their degrees. Likewise, most Philippine research journals expect their potential authors to submit their research written in English, among other languages (Hernandez, 2021). FRWs write and publish their research in English so that their works could attain a wider readership. Hence, Filipinos assimilate English as obligatory language in academic research writing.

2.2. Academic research writing across disciplines and research articles

Academic writing is a formal written register in academic institutions and scholarly publications, the main means of knowledge circulation across academic disciplines, and a key for researchers to earn credibility in their professions (Gray, 2015; Yakut et al., 2021). Researchers have examined academic writing by L1 English research writers with the notion that the grammatical features of academic registers differ from one discipline to another (e.g., Biber & Gray, 2016; Gray, 2015; Hyland, 2006, 2008; Hyland & Jiang, 2017); likewise, various disciplines employ grammatical devices in different ways (Gray, 2015; Hyland, 2006). Flowerdew (2013, p. 307) emphasizes that this "situated characteristic" takes place in disciplinary discourse communities whose language use varies as academic fields are diverse in their writing practices, research cultures, knowledge productions, and academic principles (Hyland, 2007). Nevertheless, differences in language use, especially in terms of the compressed and implicit syntactic features, have often been underexplored in L2 academic research writing by FRWs across disciplines.

Since it is a research-focused register of academic writing, the research article (RA) represents academic research writing (Biber & Gray, 2010, 2011; Biber, Gray et al., 2016; Gray, 2015). Swales (2004) elucidates that the RA has gained the utmost recognition and has become the master scholarly text in academic written discourse across disciplines. By definition, RAs are learned written informational texts which report scientifically and newly produced content, knowledge, or perspective (van Enk & Power, 2017). Gray (2015) has classified RAs into qualitative, quantitative, and theoretical sub-registers according to the research paradigms in the hard sciences (natural and physical sciences [e.g., Medicine, Physics, etc.]) which focus on empirical methods and experimentations, and in the soft sciences (behavioural and social sciences, and humanities [e.g., Applied Linguistics, Communication, Philosophy, etc.) which concentrate on the scientific examination of human behaviors and perceptions, among others. Gray (2015) describes that qualitative RAs elucidate observed qualitative data and use qualitative research designs (e.g., content analysis, grounded theory, phenomenology, etc.) in fields like Communication and Psychology; quantitative RAs explain quantitative data and employ quantitative research designs (e.g., descriptive, causal-comparative, experimental, etc.) in disciplines like Biology and Engineering; and theoretical RAs examine qualitative data and discuss theories or approaches in fields like Philosophy and Political Science. Biber (1988), Biber and Gray (2010, 2016), Biber, Johansson et al. (1999, 2021), Gray (2015), Hutter (2015), Ruan (2018), Wu et al. (2020), and Yin et al. (2021) claim that attributive adjectives, nominal prepositional phrases, noun premodifiers, and appositive noun phrases are ubiquitous in academic research writing; however, these nominal phrasal modifiers are infrequently explored in disciplinary RA sub-registers.

2.3. Compressed and implicit syntactic features

Attributive adjectives, nominal prepositional phrases, noun premodifiers, and appositive noun phrases are the most prevalent compressed and implicit syntactic features of academic research writing (Biber & Gray, 2010, 2016; Biber, Johansson et al., 1999, 2021). However, studies of these nominal phrases frequently center on L1 English academic research writing (e.g., Biber & Gray, 2010, 2011, 2016; Biber, Gray et al., 2016; Gray, 2015; Halliday, 1993/1996; Hutter, 2015). Biber and Gray (2010, 2011, 2016), Biber, Gray et al. (2016), Gray (2015), and Hutter (2015) deflated the stereotype that academic writing is full of elaborated and explicit syntactic features. They found that academic research writing across hard and soft disciplines (applied linguistics, communication, education, history, philosophy, psychology, political science, sociology, astronomy, biology, ecology, medicine, physics, physiology, and science) heavily relies on nominal phrases and not clauses. Halliday (1993/1996) points out that these nominal phrases are challenging to comprehend because of their lack of syntactic constituents (Biber & Gray, 2010, 2016) and of their complicated meaning relations (Ruan, 2018). For instance, **information** *technology* company contains two consecutive noun premodifiers (**information** and *technology*) referring to the head noun (company); however, **information** could be seen as a premodifier for *technology* rather than the head noun company.

Comparative to the findings of the preceding research, other studies of nominal phrases had concentrated on L2 English academic research writing, more specifically academic EFL and ELF research writing (e.g., Ansarifar et al., 2018; Hernandez, 2021; Ruan, 2018; Wu et al., 2020; Yin et al., 2021). Ansarifar et al. (2018) discovered that noun premodifers, attributive adjectives with noun premodifiers, and nominal prepositional phrases had the highest frequencies of use in RA abstracts of Persian expert research writers and the dissertation and master's abstracts of Persian novice research writers. Similarly, Hernandez (2021) determined that the four nominal phrases co-occur in RAs written by Filipino researchers in education sciences, humanities, and social sciences. Likewise, Ruan (2018) revealed that these phrasal modifiers are frequent in RA abstracts of Chinese and L1 English research writers in applied linguistics. Moreover, Wu et al. (2020) identified that these noun phrases are dominant in humanities, science, and social science academic ELF writing. Furthermore, Yin et al. (2021) showed that recurrent nominal phrases comprise RA part-genres by professional and emerging Chinese academic research writers. Although these studies were grounded in L2 English academic research writing, only Ansarifar et al. (2018) and Ruan (2018) focused solely on nominal pre- and postmodification. In addition, only Hernandez (2021) considered L2 English academic research writing by FRWs as L2 English users. Overall, none of them attempted at exploring the four compressed and implicit nominal phrases alone in disciplinary RA sub-registers authored by FRWs.

There is a need to cross-examine the compressed and implicit syntactic features in disciplinary RAs authored by FRWs because of the following reasons: first, FRWs across disciplines frequently employ the four nominal phrases in writing and publishing RAs (Hernandez, 2021); thus, their use of these nominal phrases in academic research writing deserves analysis; second, English is the Filipinos' institutional language in research writing and publication (Dayag, 2012, 2014); hence, the four nominal phrases used by FRWs warrant investigation; third, the four English nominal phrases are characteristic syntactic structures of academic writing (Biber & Gray, 2010, 2011, 2016; Biber, Gray et al., 2016; Gray, 2015; Hernandez, 2021; Hutter, 2015; Malakhovskaya et al., 2021; Ruan,

2018; Wu et al., 2020; Yin et al., 2021); however, they are often ignored syntactic features of academic research writing in the Philippines; and finally, no research has been published, cross-analyzing the four compressed and implicit syntactic features in qualitative and quantitative disciplinary RAs authored by FRWs. These reasons strongly justify that research on the four compressed and implicit syntactic features in L2 English academic research writing should be undertaken.

3. Objectives of the Study

In this research, I cross-analyzed attributive adjectives, nominal prepositional phrases, noun premodifiers, and appositive noun phrases in L2 English academic research writing by FRWs in AL, ME, and SOC. Specifically, I sought to identify the compressed and implicit syntactic features which most frequently co-occur across the disciplinary RA sub-registers and determined whether these syntactic features significantly differed from other syntactic features.

4. Method

4.1. Research design, data sources, and data collection

Hereby, I used descriptive research design to cross-analyze the four nominal phrases in L2 English academic research writing by FRWs across the three disciplines. The data sources were 42 published RAs (with 179,673 tokens) consisting of 14 RAs per discipline which I randomly selected from Open Access (OA) Philippine research journals. Following Gray's (2015) RA sub-classifications, I categorized them into five RA datasets, adopting Gray's (2015) qualitative and quantitative RA sub-registers: (1) qualitative AL; (2) quantitative AL; (3) quantitative ME; (4) quantitative SOC; and (5) qualitative SOC (see Table 1). ME has no qualitative RA sub-register because most of the research designs employed in ME research are quantitative (Hernandez, 2021). I chose OA journals so that L2 English academic research writing can be represented across the Philippines and considered AL, ME, and SOC because these are in-demand research disciplines in the country. Disciplinary RAs published in a 10-year period were considered as this study is a synchronic cross-analysis. Table 1 shows the randomly selected disciplinary RAs in the study.

Table 1 Randomly selected disciplinary RAs

Years	Discipline	No. of RAs per Disciplinary Sub-register				RA *f.*	Overall Tokens
		QUAL	Tokens	QUAN	Tokens		
2010-2018	AL	7	27,189	7	30,088	14	57,277
2011-2019	ME	7		7	55,889	14	55,889
2009-2019	SOC	7	35,445	7	31,062	14	66,507
Total	3	21	62,634	21	117,039	42	179,673

The OA journals selected for this study are hereby listed:

1. Applied Linguistics
Alipato: A Journal of Basic Education; Asian Journal of English Language Studies; Asia-Pacific Journal of Multidisciplinary Research; Asia Pacific Journal of Education, Arts and Sciences; CNU Journal of Higher Education; International Journal of Education Research for Higher Learning; Journal of Educational and Human Resource Development; JPAIR Multidisciplinary Research; MSEUF Research Studies; Pamalandong; Philippine Journal of Linguistics; Philippine ESL Journal; Tilamsik Journal of Research of the College of Arts and Sciences; The Normal Lights; The RAP Journal; UNP Research Journal; WMSU Research Journal

2. Measurement and Evaluation
Asia-Pacific Journal of Multidisciplinary Research; Asia Pacific Journal of Maritime Education; CNU Journal of Higher Education; Development Education Journal of Multidisciplinary Research; Educational Measurement and Evaluation Review; Harvest, ISU-Cabagan Journal of Research; JPAIR Multidisciplinary Research; LPL Research Journal; Philippine Journal of Counseling Psychology; SMCC Higher Education Research Journal; The Assessment Handbook; MSEUF Research Studies; TIP Research Journal; UIC Research Journal; UNP Research Journal

3. Sociology
Alipato: A Journal of Basic Education; Asia Pacific Journal of Education, Arts and Sciences; Asia-Pacific Journal of Multidisciplinary Research; Asia-Pacific Social Science Review; CNU Journal of Higher Education; DANYAG: Journal of Humanities and Social Sciences; ARETE International Journal of Liberal Arts, Education, Social Sciences and Philosophical Studies; JPAIR Multidisciplinary Research; LPU Laguna Journal of Multidisciplinary Research; Luz Y Saber; Nursing Research Journal; Pamalandong; Philippine Journal of Social Sciences and Humanities; Philippine Social Science Review; Recoletos Multidisciplinary Research Journal; Social Sciences and Development Review; The Paulinian Compass [The Asia-Pacific Journal on Compassion Studies]; UNP Research Journal

FRWs' nationality and affiliation are important considerations in the selection of the disciplinary RAs. To ascertain that the disciplinary RAs are authored by FRWs, I analyzed the writer's last names and academic institutions. That is, I considered the last names which are typical in the Philippines and institutions which are traceable only in the Philippines, adapting Ruan's (2018) study. I compared and/or contrasted the five disciplinary RA groups as separate datasets.

4.2. Data analysis

I utilized Biber, Johansson et al.'s (1999, 2021) framework of the four syntactic structures associated with compressed and implicit written academic discourse style. The framework has been repeatedly employed in grammatical studies of academic English (e.g., Biber & Gray, 2010, 2016; Gray, 2015). Table 2 shows the four compressed and implicit syntactic features with examples.

Table 2 Compressed and implicit syntactic features (Biber, Johansson et al., 1999, 2021)

Four nominal phrases	Samples
Attributive adjectives	**thorough** implementation, **important** changes, **special** process (Biber, Johansson et al., 2021, pp. 508, 512)
Nominal prepositional phrases	turbulence **in lasers and other optical systems**, the possibility **of a death wish** (Biber, Johansson et al., 2021, pp. 629, 962)
Noun premodifiers	**glass** windows, **pencil** case, **women** algebraists, **irrigations** water (Biber, Johansson et al., 2021, p. 584)
Appositive noun phrases	both types of eggs **(diapause and non-diapause)**, Kinetics Technology International **(KIT)**, Vaclav Havel, **the dissident playwright** (Biber, Johansson et al., 2021, pp. 600, 632, 634)

This framework was used as coding scheme. To code the four nominal phrases in each disciplinary RA dataset, I used LancsBox (Brezina et al., 2021) and manual coding. Through LancsBox, I traced attributive adjectives, nominal prepositional phrases, and noun premodifiers by using smart searches – ADJECTIVE for attributive adjectives, NOUN for noun premodifiers, and PREPOSITIONAL PHRASE for nominal prepositional phrases, and saved them in Excel files. However, I had to do manual coding because corpus tools can be inconsistent in analyzing grammatical features (Egbert et al., 2020). For instance, adjectives may be used as attributive or predicative; prepositional phrases may be used as nominal or adverbial in sentences. Of the four nominal phrases, only appositive noun phrases needed to be hand-coded alone because they cannot be located by LancsBox.

Three qualified inter-coders separately analyzed all the coded nominal phrases. Two rounds of inter-coding occurred. In the first, each coder and I met together and discovered opposing judgments. We resolved these contradictions by conducting more discussions until we achieved unanimous decisions. In the second, we reassessed our judgments until we reached final decision. Inter-coder reliability computed through Fleiss Kappa yielded 0.97, an almost perfect reliability agreement.

4.3. Statistical treatments

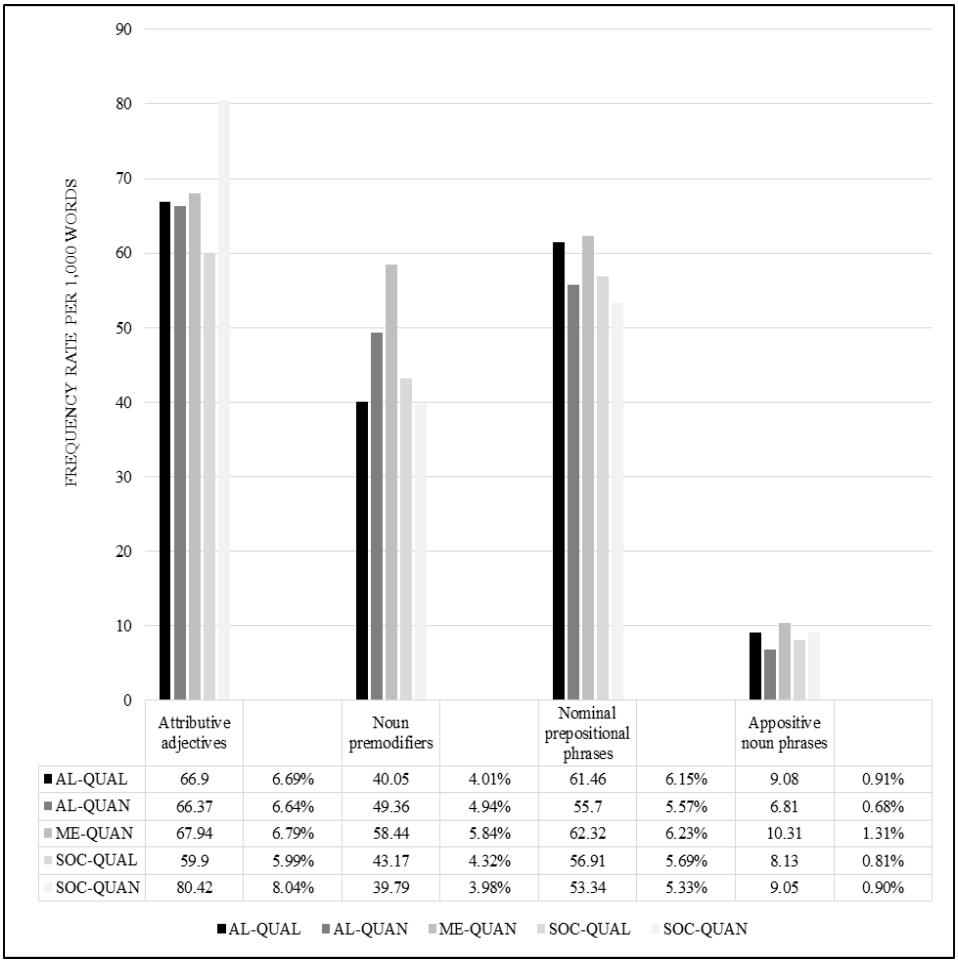
For the raw frequencies of nominal phrases to be directly comparable, I normalized the frequency count of each nominal phrase by the total number of words of each disciplinary RA sub-register and then multiplied each frequency count by 1,000. This calculation was based on corpus-based studies (e.g., Biber & Gray, 2010, 2016; Biber, Gray et al., 2016; Gray, 2015; Hutter, 2015). Then, each normed frequency rate was divided into the tokens of each disciplinary RA sub-register to compute for the percentage equivalents (Cheusheva, 2021). One-way ANOVA between groups was also utilized to identify whether particular nominal phrases are real compressed and implicit syntactic features of L2 English academic research writing.

5. Findings and Discussion

This section presents the results and their interpretations. Main results are compared and/or contrasted with the findings of related studies wherever possible.

Of the four compressed and implicit syntactic features, attributive adjectives succeeded by nominal prepositional phrases, and then noun premodifiers had the highest frequencies of use across the five disciplinary RA sub-registers (see Fig. 1). Although this finding supports Ansarifar et al.'s (2018) and Ruan's (2018) claim, it is disparate to Biber and Gray's (2010, 2016) result that nominal prepositional phrases are more dominant than attributive adjectives. Such discrepancy is relatable to the English users and disciplines considered in their study and in the current study. On the one hand, Biber and Gray (2010, 2016) analyzed RAs in a variety of disciplines (science/medicine, education, psychology, history, biology, ecology, and physiology), whereas I explored qualitative and quantitative RAs from AL, ME, and SOC. Second, Biber and Gray (2010, 2016) considered L1 English research writers, while I involved FRWs as L2 English research writers. Such result is also inconsistent with Wu et al.'s (2020) finding that noun premodifiers are more frequent than attributive adjectives. This discrepancy could be associated with the different data sources that Wu et al. (2020) and I considered. Wu et al. (2020) used SciELF which is one of the components of the Written English as a Lingua Franca in Academic settings corpus and COCA (Corpus of Contemporary American English). SciELF consists of (unedited) RAs from 10 ELF writer clusters (Finish, Czech, French, Chinese, Spanish, Russian, Swedish, Italian, Portuguese, and Romanian), whereas the corpus of this study comprised of disciplinary RAs authored by FRWs.

To identify whether the three leading phrasal modifiers truly depict L2 English academic research writing, I ran one-way ANOVA between groups which revealed that the three phrasal modifiers were significantly different at the $p<.05$ level [F (3,16)] = 100.92, p = <.0]. This result indicates that there is significant difference on the use of the four compressed and implicit syntactic features. Post-hoc Tukey HSD test yielded that the means between and among the four nominal phrases were significantly different: attributive adjectives (M = 68.31, SD = 7.47), nominal prepositional phrases (M = 46.16, SD = 7.87), noun premodifiers (M = 57.95, SD = 3.83), and appositive noun phrases (M = 8.68, SD = 1.30); nominal prepositional phrases (M = 46.16, SD = 7.87), noun premodifiers (M = 57.95, SD = 3.83), and appositive noun phrases (M = 8.68, SD = 1.30); and noun premodifiers (M = 57.95, SD = 3.83) and appositive noun phrases (M = 8.68, SD = 1.30). From these results, attributive adjectives, nominal prepositional phrases, and noun premodifiers show a significant difference from appositive noun phrases on their frequencies of use, hence strongly indicating that the three syntactic features characterize L2 English academic research writing by FRWs.



	Attributive adjectives		Noun premodifiers		Nominal prepositional phrases		Appositive noun phrases	
AL-QUAL	66.9	6.69%	40.05	4.01%	61.46	6.15%	9.08	0.91%
AL-QUAN	66.37	6.64%	49.36	4.94%	55.7	5.57%	6.81	0.68%
ME-QUAN	67.94	6.79%	58.44	5.84%	62.32	6.23%	10.31	1.31%
SOC-QUAL	59.9	5.99%	43.17	4.32%	56.91	5.69%	8.13	0.81%
SOC-QUAN	80.42	8.04%	39.79	3.98%	53.34	5.33%	9.05	0.90%

Fig. 1 Frequencies of use of compressed and implicit syntactic features

As shown in Fig. 2, the three leading nominal modifiers are plotted much higher than and very distant from appositive noun phrases. These placement and distance strongly indicate that the three nominal modifiers extremely determine L2 English academic research writing.

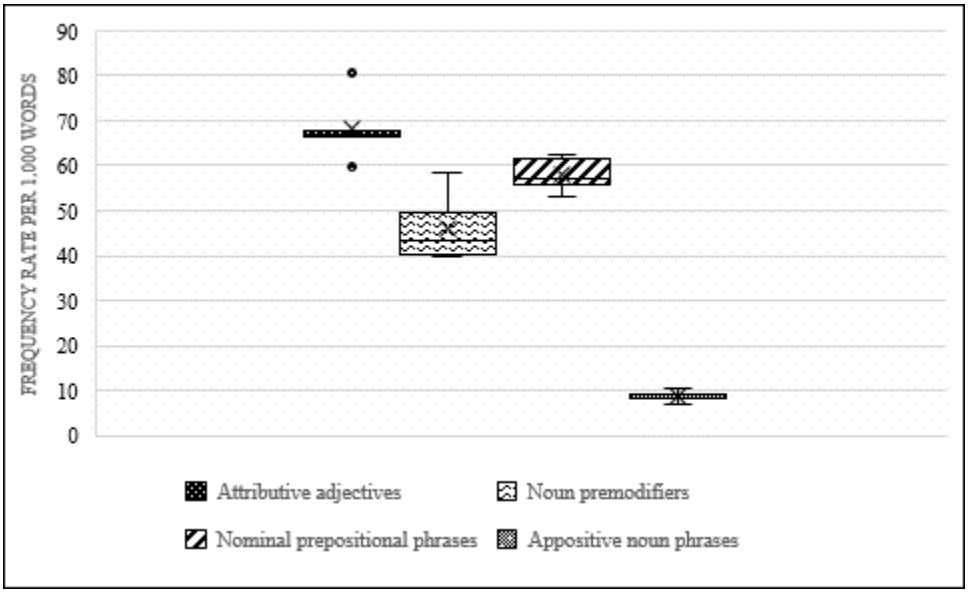


Fig. 2 Distribution of compressed and implicit syntactic features

As the three nominal phrases topped in frequencies of use, they are probably repeatedly used in almost all sentences across the disciplinary RA sub-registers. For example, extract 1 contains recurring attributive adjectives (bolded), nominal prepositional phrases (bracketed), and noun premodifiers (italicized).

(1) Remittance [in forms [of money and **symbolic** exchange]] is moderately perceived as a form [of **social** capital.] Receiving *material* gifts gives them satisfaction; although, gestures [of love [between **migrant** parents and **left-behind** children]] are low. These results show that their **high** level [of *family* **social** capital] is the sum [of their experiences [of bonding [through **emotional** connection and **meaningful** and *quality* interaction]]] but less on the aspect [of remittances.] [Quantitative SOC]

While a significant difference exists between the three nominal phrases and appositive noun phrases, each phrasal modifier had different frequencies of use across the five disciplinary RA sub-registers, hence supporting Gray's (2015) assertion that linguistic differences exist within RA sub-registers across disciplines. In the following sections, each compressed and implicit nominal modifier is discussed.

5.1. Attributive adjectives

Attributive adjectives occurred most dominantly in quantitative SOC RAs (80.42, 80.04%) which is far greater than attributive adjectives in quantitative ME RAs (67.94, 6.79%), qualitative AL RAs (66.9, 6.69%), and quantitative AL RAs (66.37, 6.64%) with almost equal frequencies of use. However, they were least frequent in qualitative SOC RAs (59.9, 5.99%). These findings show that attributive adjectives are especially more

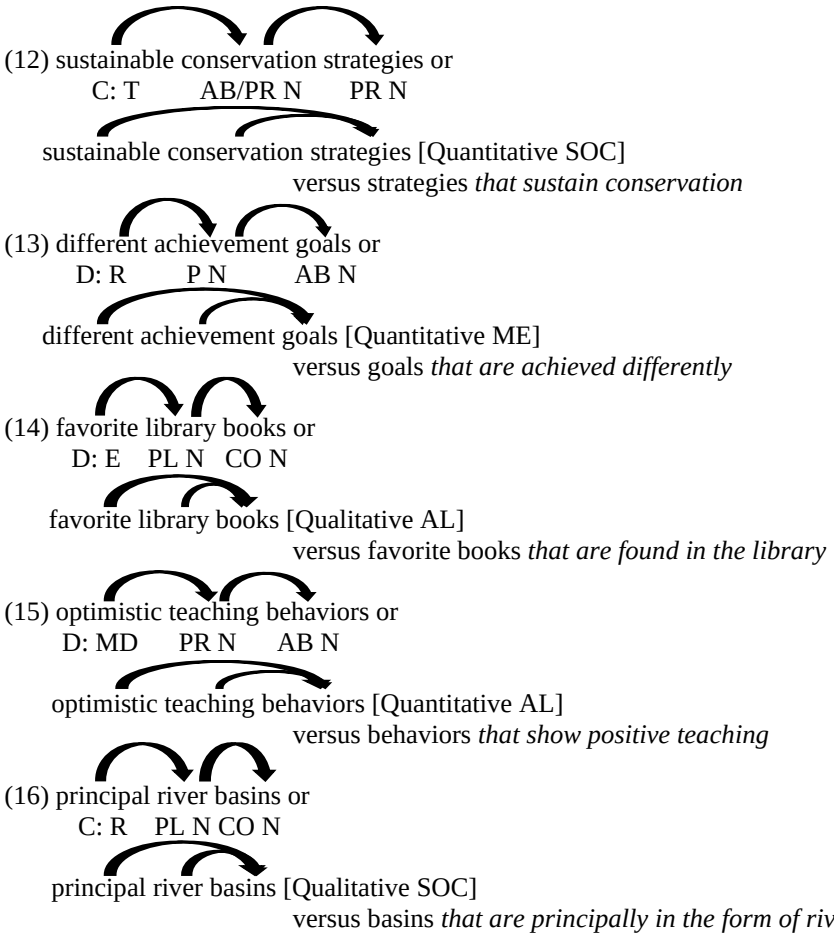
common in quantitative research writing in SOC but are less common in qualitative research writing in the same discipline. In addition, they are comparatively common in quantitative research writing in ME and qualitative and quantitative research writing in AL. As attributive adjectives ranked first among the four nominal phrases, the five disciplinary RA sub-registers are compressed and implicit primarily through attributive adjectives. In my data analyses, I found that attributive adjectives across disciplinary RAs can be descriptors or classifiers for the head nouns (e.g., extracts 2 to 11). On the one hand, descriptors (Ds) identify "color (e.g., white, blue), size/quantity/extent (e.g., large, deep), time (e.g., new, young), and emotion/evaluation (e.g., important, excellent), and miscellaneous descriptions (e.g., complex, optimistic)" and are "typically gradable" (Biber, Johansson et al., 2021, pp. 506-507). On the other hand, classifiers "delimit or restrict a noun's referent, by placing it in a category in relation to other referents" and are "typically non-gradable" and are "relational/classification/restrictive (e.g., direct, main), affiliative (e.g., Philippine, English), or topical (e.g., legal, sexual)" (Biber, Johansson et al., 2021, pp. 506-507). These descriptors and classifiers provide specifications to the head nouns of different types (Biber, Johansson, et al., 1999, 2021), making the latter clear to understand (Ruan, 2018), as in:

(2) sexual partners,
C: T AN N
(3) rapid secondary socialization [Quantitative SOC]
D: E C: R AB/PR N
(4) appropriate items,
D: MD CO N
(5) significant indirect effects [Quantitative ME]
D: E C: R PR N
(6) phonological changes,
C: T AB/PR N
(7) particular linguistic features [Qualitative AL]
C: R C: T AB N
(8) same pronunciation [N],
C: R PR N
(9) strategic instructional materials [Quantitative AL]
C: T C: T CO N
(10) democratic supervision,
C: T PR N
(11) supportive younger siblings [Qualitative SOC]
C: T D: TI AN N

For example, 2 in quantitative SOC RA has the topical classifier (C: T) 'sexual' specifying the head noun 'partners' (an animate noun [AN N]). Similarly, 4 in quantitative ME RA contains the miscellaneous descriptor (D: MD) 'appropriate' identifying 'items' (a concrete noun [CO N]); 8 in quantitative AL RA has the relational classifier 'same' (C: R) specifying 'pronunciation' (a process noun (PR N). These illustrate single attributive adjectives, premodifying nouns across the disciplinary RAs. Two attributive adjectives of same or different semantic categories may also co-occur to premodify a head noun. For instance, 7 in qualitative AL RA has the C: R 'particular' and

the C: T ‘linguistic’ (both classifiers), premodifying ‘features’ (an abstract noun [AB N]). In contrast, 3 in quantitative SOC contains the evaluative descriptor (D: E) ‘rapid’ and the C: R ‘secondary’ (the first is a descriptor; the second is a classifier), premodifying ‘socialization’ (an abstract/process noun [AB/PR N]). The same can be observed in 5. Likewise, 11 contains the C: T ‘supportive’ and the time descriptor (D: TI) ‘time’ (the former is a classifier; the latter is a descriptor), individually referring to ‘siblings’ (an AN N).

However, attributive adjectives also convey intricate meaning or logical relationships when they co-exist with noun premodifiers in a way that an attributive adjective could be perceived as the premodifier to the noun premodifier or as the premodifier to the head noun (Ruan, 2018) (e.g., extracts 12 to 16). Due to their compressed form, attributive adjectives’ meaning relations to the head nouns become implicit. This implicitness stems from the absence of syntactic elements between them and the head nouns but could be made explicit by elaborated syntactic features (Biber & Gray, 2010, 2016; Ruan, 2018), for example, relative *that* clauses (italicized), as in the following:



These attributive adjectives either premodify the noun premodifiers next to them or the head nouns (as indicated by the curved down arrows) which may cause confusion at least to a non-expert reader (Biber & Gray, 2010, 2016) in each of the three disciplines. For example, two interpretations can be considered for extract 15: first, 'optimistic' premodifies 'teaching', while 'teaching' premodifies the head noun 'behaviors'; second, both 'optimistic' and 'teaching' together premodify 'behaviors'. The relative *that* clause in 'behaviors *that show positive teaching*' could clarify the meaning relationship between the two nominal premodifiers and the head noun. While such compression and implicitness exist in attributive adjectives, less compression and implicitness were observed with nominal prepositional phrases.

5.2. Nominal prepositional phrases

Although nominal prepositional phrases succeeded attributive adjectives, they were still far more frequent than appositive noun phrases as noun postmodifiers indicating that they are very much common phrasal postmodifiers in L2 English academic research writing. They were most frequent in quantitative ME RAs (62.32, 6.23%) but least frequent in quantitative SOC RAs (53.34, 5.33%). However, they had relatively closed occurrences in all disciplinary RA sub-registers: quantitative ME RAs (62.32, 6.23%); qualitative AL RAs (61.46, 6.15%); qualitative SOC RAs (56.91, 5.69%); quantitative AL RAs (55.7, 5.57%); and quantitative SOC RAs (53.34, 5.33%). This slant suggests that nominal prepositional phrases are used similarly in all the five disciplinary RA sub-registers. These phrases form complex sequences and multiple embeddings (Biber, Johansson et al., 1999, 2021) which I observed especially in *of*-phrases (as illustrated in extracts 17 to 21 across disciplinary RA sub-registers).

(17) assessment of the current model of general education [Quantitative ME]

assessment →
of the current model →
current model →
of general education

(18) explicit instruction of the writing conventions of the method section for sub-discipline-specific kind of writing [Qualitative AL]

explicit instruction →
of the writing conventions →
writing conventions →
of the method section…
kind →
of writing

(19) one of the historical markers of the priceless ancestral heritage of the Philippines [Qualitative SOC]

one →
of the historical markers →
the historical markers →
of the priceless ancestral heritage →
the priceless ancestral heritage →
of the Philippines

(20) the levels of self-efficacy of practicing teachers [Quantitative AL]

the levels →
of self-efficacy →
self-efficacy →
of practicing teachers

(21) high level of meaningful and frequent socialization of left-behind children [Quantitative SOC]

high level →
of meaningful and frequent socialization →
meaningful and frequent socialization →
of left-behind children

These complex nominal *of*-phrases contain two to four phrasal embeddings. For instance, 17 has two *of*-phrases. The first *of*-phrase (*of the current model*) is embedded in the head noun *assessment* and the second *of*-phrase (*of general education*) is embedded in the first *of*-phrase's prepositional object *model*. In contrast, 18 contains three *of*-phrases. The first *of*-phrase (*of the historical markers*) is embedded in the head noun *one*; the second *of*-phrase (*of the priceless ancestral heritage*) is embedded in the first *of*-phrase's prepositional object *markers*; and the third *of*-phrase (*of the Philippines*) is embedded in the second *of*-phrase's prepositional object *heritage*. With these multiple embedded *of*-phrases in the disciplinary RA sub-registers, L2 English academic research writing could be construed to have full such phrasal modification because prepositional phrases headed by *of* are the most common nominal prepositional phrases in academic research writing (Biber & Gray, 2016). In addition, *of*-phrases are frequently the syntactic variant of *s'* genitives and/or noun premodifiers (Biber & Gray, 2016; Biber, Johansson et al., 1999, 2021), indicating that *of*-phrases lack alternative elaborated and explicit syntactic features. Thus, they maintain compression and implicitness. Unlike *of*-phrases, *in*- and *for*-phrases normally have relative *that* and *wh*- clauses and noun-controlled *that*-clauses (italicized) as their elaborated and explicit syntactic alternatives, as shown in extracts 22 to 31.

(22) performance in the professional subjects →
performance that students have in their professional subjects

(23) rationale for any future revisions →
rationale that is subject for any future revisions
[Quantitative ME]

(24) competition in the professional world →
competition which happens in the professional world
(25) framework for the NHIJ academic writers →
framework that is used by NHIJ academic writers
[Qualitative AL]
(26) breadwinners in the family →
breadwinners who support the family
(27) agenda for the rehabilitation, improvement and sustainability →
agenda which are prepared for rehabilitation, improvement and sustainability
[Qualitative SOC]
(28) common errors in their written reports →
common errors that students commit in their written reports
(29) importance for written communication →
importance that weblogs have for written communication
[Quantitative AL]
(30) involvement in community life →
involvement that children value in their community life
(31) implications for social adjustment →
implications that social capital have for social adjustment
[Quantitative SOC]

Specifically, 23 and 25 have relative *that* clauses; 24, 26, and 27 have relative *which* and *who* clauses as their elaborated and explicit syntactic equivalents; and 22 and 28 to 31 have alternative noun-controlled *that*-clauses. These elaborated and explicit features make the meaning relationships between the head noun and *in*- and *for*-phrases overt. Given such elaborated and explicit syntactic alternatives, *in*- and *for*-phrases are less reduced syntactic structures unlike *of*-phrases which lack elaborated and explicit syntactic alternatives. Being second to attributive adjectives in terms of frequencies of use across disciplinary RA sub-registers, nominal prepositional phrases are proven as the most common phrasal postmodification particularly in L2 English academic research writing. This claim corroborates Biber and Gray's (2016) finding that prepositional phrases are the most recurrent nominal postmodification.

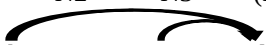
5.3. Noun premodifiers

As with nominal prepositional phrases, noun premodifiers occurred most in quantitative ME RAs (58.44, 5.84%) but occurred least in quantitative SOC RAs (39.79, 3.98%). Nevertheless, they had closed frequencies in quantitative AL RAs (49.36, 4.94%), qualitative SOC RAs (43.17, 4.32%), and qualitative AL RAs (40.05, 4.01%). The dominance of nominal prepositional phrases and noun premodifiers in quantitative ME RAs show that ME academic research writing employs extremely dense packaging of information. Of the three disciplines, ME could be considered a hard science as it usually deals with quantifiable outcomes of individuals' performances (Hernandez, 2021), corroborating Biber and Gray's (2010, 2016) finding that noun premodifiers are most common in hard science disciplines (e.g., biology, ecology, medicine, and physiology). Noun premodifiers in other disciplinary RA sub-registers were relatively common,

substantiating Biber and Gray's (2016) claim that they are frequent in social science academic writing. Like attributive adjectives and nominal prepositional phrases, noun premodifiers make the disciplinary RA sub-registers highly compressed and implicit because of the absence of function words which help reveal the meaning relationships between the premodifying noun and the head noun (Biber, Johansson et al., 1999, 2021). The following single noun premodifiers (where N1 stands for the single noun premodifier and N2 refers to the head noun) and multiple noun premodifiers (where N1 stands for the first noun premodifier, N2 for the second noun premodifier, and N3 for the head noun) have very compact information packaging, and thus convey different confusing meaning relations.

(32) factor structure → *factor/s that consist/s the structure*
N1 N2 (N2 is made of N1)

(33) distribution requirement model → *model for required distribution*
N1 N2 N3 (N3 is for the purpose of N1 and 2)



or distribution requirement model

[Quantitative ME]

(34) reading performance → *performance about reading*
N1 N2 (N2 is about N1)

(35) story grammar knowledge → *knowledge about the story grammar*
N1 N2 N3 (N3 is about N1 and N2)

or story grammar knowledge

[Quantitative AL]

(36) work hours → *hours for work*
N1 N2 (N2 is for the purpose of N1)

(37) identity integration problems → *problems about identity integration*
N1 N2 N3 (N3 is about N1 and N2)

or identity integration problems

[Qualitative SOC]

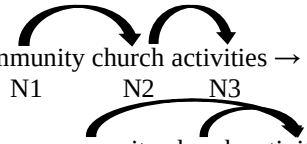
(38) vowel shift → *X produces another vowel*
N1 N2 (N1 is the object of the process in N2)

(39) tense sequence errors → *errors about tense sequence*
N1 N2 N3 (N3 is about N1 and N2)

or tense sequence errors

[Qualitative AL]

(40) age group → *a group that is categorizable by age*
N1 N2 (N2 is classifiable by N1)



(41) community church activities → *activities in the community church*
N1 N2 N3 (N3 takes place in N1 and N2)
or community church activities

[Quantitative SOC]

The inexplicit meanings of these noun premodifiers become exposed when they are paraphrased into either relative *that* clauses, sentence, or nominal prepositional phrases. For example, 32 has *factor/s that consist/s the structure* (a relative *that* clause) (N2 is made of N1). Similarly, 38 has *X produces another vowel* (a sentence) (N1 is the object of the process in N2). In addition, 36 has *hours for work* (a nominal prepositional phrase) (N2 is for the purpose of N1). Like extract 36, 34 also has an alternative nominal prepositional phrase (*performance about reading*). For single noun premodifiers like these, their point of reference clearly point to their head nouns. However, like multiple attributive adjectives, multiple noun sequences which premodify a head noun express even more baffling meaning relations (e.g., extracts 33, 35, 37, 39, and 41) in the sense that the N1 either premodifies the N2 or the head noun (N3). Like attributive adjectives, these noun premodifiers could also cause difficulty at least to non-expert readers (Biber & Gray, 2010, 2016) in the three disciplines. Overall, the implicit meaning relations that noun premodifiers have in disciplinary RA sub-registers show that L2 English academic research writing uses a compressed discourse style.

5.4. Appositive noun phrases

Of the four dependent phrases, appositive noun phrases had the least frequencies of use. Despite their low occurrences, appositive noun phrases occurred closely frequently in the five disciplinary RA sub-registers: quantitative ME RAs (10.31, 1.31%); qualitative AL RAs (9.08, 0.91%); quantitative SOC RAs (9.05, 0.90%); qualitative SOC RAs (8.13, 0.81%); and quantitative AL RAs (6.81, 0.68%). With these almost equal findings, it could be said that appositive nouns phrases are still relatively present across the five disciplinary RA sub-registers. Appositive noun phrases are two co-referential noun phrases where the second noun phrase provides an identification or description to the first noun phrase (Biber & Gray, 2010, 2016), as exemplified in extracts 42 to 46:

(42) higher order thinking skills (HOTS) [Quantitative ME]

(43) comprehension part, a stage of the academic discourse [Qualitative AL]

(44) abortion (75% or 68 respondents), exhibitionism (71% or 65 respondents), prostitution (70% or 64 respondents), orgies or group sex (70% or 64 respondents), phone sex (66% or 60 respondents), anal sex (65% or 59 respondents), homosexual sexual encounters (64% or 58 respondents), voyeurism (59% or 54 respondents), cybersex (58% or 53 respondents), and the use of sex toys (55% or 50 respondents) [Quantitative SOC]

(45) Episcopal Commission on Lay Apostolate (ECLA) [Qualitative SOC]

(46) localized curriculum (locality-based reading/teaching materials) [Quantitative AL]

Extracts 42, 43, and 45 illustrate the most common types of appositive noun phrases (Biber & Gray, 2016). Specifically, 42 and 45 follow the NP + (ACRONYM) pattern where the acronyms (HOTS) and (ECLA) assign a very reduced version of the first noun phrases 'higher order thinking skills' and 'Episcopal Commission on Lay Apostolate', respectively. In contrast, 43 illustrates NP + , + NP pattern where the second noun phrase 'a stage of the academic discourse' describes the first noun phrase 'comprehension part'. Although these appositive phrases contain implicit meaning relationships, the second noun phrase could bear more specialized meanings especially when it has indirect referential association to the first noun phrase (Biber & Gray, 2016). For example, 44 and 46 exemplify NP + (NP) pattern. Extract 44 has parentheses containing the percentages and the numbers of research participants who selected the entity represented in the first noun phrases (i.e., abortion…, exhibitionism…, prostitution…, etc.); extract 46 also has parentheses containing 'locality-based reading/teaching materials' as components of 'localized curriculum' which is the first noun phrase. Since appositive noun phrases had low occurrences across the disciplinary RA sub-registers, it can be construed that not all compressed and implicit syntactic features equally characterize L2 English academic research writing by FRWs across disciplines.

6. Conclusion and Implications

Research on compression and implicitness in L2 English academic research writing has been an uncharted area of study in academic writing research especially in the Philippines. Therefore, I cross-examined the compressed and implicit syntactic features in L2 English academic research writing by FRWs in AL, ME, and SOC. In particular, I determined the most frequently co-occurring compressed and implicit syntactic features in disciplinary RA sub-registers and identified whether these syntactic features significantly differed from other syntactic features. Accordingly, attributive adjectives, nominal prepositional phrases, and noun premodifiers had the highest frequencies of use across disciplinary RA sub-registers, and they significantly differed from appositive noun phrases as revealed by one-way ANOVA between groups with Post-hoc Tukey HSD. In conclusion, the three nominal phrases are universal and the most functional compressed and implicit syntactic features of L2 English academic research writing, and so are much more flexible than appositive noun phrases. As it is characterized by the three compressed and implicit syntactic features, L2 English academic research writing is an extremely nominal written academic discourse regardless of its disciplinary origin and research nature. The study has applied implications for academic writing pedagogy especially in the Philippines and in nations where English is used as a second/foreign language or as a lingua franca.

Academic writing pedagogy concentrates primarily on teaching materials preparation, academic writing instruction, and academic writing assessment. On materials preparation, academic writing textbook writers need to incorporate the three compressed and implicit syntactic features as language foci of the content or skills lessons in writing academic

research. Textbook writers ought to include examples of the three nominal phrases based on a large corpus of qualitative and quantitative disciplinary RAs. Hence, academic writing teachers and students in the graduate and undergraduate levels could be informed of what to teach and what to learn and advanced academic writing could be more contextualized (Hernandez, 2020). On instruction, academic writing teachers need to allot longer learning time for the three nominal phrases because these phrases are difficult especially for beginning academic writers (Biber & Gray, 2010, 2016). Students in the three disciplines need to be immersed with more consciousness-raising activities and writing exercises which emphasize economy of expression and concentrate on meaning relations aside from grammatical forms. Thus, they may develop or enhance their ability to write academic research texts using a compressed and implicit discourse style. On assessment, academic writing teachers need to provide more feedback on students' use of the three compressed and implicit syntactic features, among others. Thus, students across the three disciplines may produce more quality research texts, reflecting the phrasal characteristics of L2 English academic research writing.

This study has contributed knowledge to academic writing research in the Philippines and contexts where English is a second/foreign language or is a lingua franca. However, it also offers research opportunities. Future studies may cross-examine the four compressed and implicit syntactic features in disciplinary RAs authored by other ESL/EFL/ELF research writers to determine whether there is a significant difference of use between the three contexts of academic research writing. Cross-analyzing the nominal phrases in RAs in hard sciences like geology, mathematics, and statistics and other soft sciences like literature, philosophy, and political science must be undertaken to differentiate the compressed and implicit discourse style in hard and soft disciplines. Exploring this discourse style in occluded academic writing sub-registers such as research proposals may uncover the specific nominal phrases that characterize them. Other dependent phrases such as adverbials equally deserve cross-analysis in disciplinary RAs. These research directions could provide more positive implications for academic writing pedagogy particularly in ESL/EFL/ELF contexts. It may also inform academic research journals across AL, ME, and SOC and other disciplines. As attributive adjectives, nominal prepositional phrases, noun premodifiers, and appositive noun phrases are under-researched compressed and implicit syntactic features in L2 English academic research writing, more studies of the four nominal phrases in disciplinary RA sub-registers require investigations.

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Links of Research Journals

1. Applied Linguistics

Alipato: A Journal of Basic Education (https://www.journals.upd.edu.ph/index.php/ali)
Asian Journal of English Language Studies (https://ajels.ust.edu.ph/)
Asia-Pacific Journal of Multidisciplinary Research (http://www.apjmr.com/)
Asia Pacific Journal of Education, Arts and Sciences (http://apjeas.apjmr.com/)
CNU Journal of Higher Education (https://www.facebook.com/cnujhe/; jheonline@cnu.edu.ph)
International Journal of Education Research for Higher Learning (https://ejournals.ph/issue.php?id=1102#:~:text=International%20Journal%20of%20Education%20Research%20for%20Higher%20Learning%20(formerly%20UIC,significant%20issues%20in%20the%20disciplines)
Journal of Educational and Human Resource Development (https://www.ijterm.org/index.php/jehrd/issue/view/19)
JPAIR Multidisciplinary Research (https://philair.ph/publication/index.php/jpair/index)
MSEUF Research Studies (https://ejournals.ph/issue.php?id=815)
Pamalandong (https://ejournals.ph/issue.php?id=643)
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Philippine ESL Journal (https://www.elejournals.com/philippines-esl-journal/)
Tilamsik Journal of Research of the College of Arts and Sciences (https://sites.google.com/site/tilamsikjournal/)
The Normal Lights (https://po.pnuresearchportal.org/ejournal/index.php/normallights)
The RAP Journal (https://ejournals.ph/issue.php?id=671)
UNP Research Journal (https://ejournals.ph/issue.php?id=963)
WMSU Research Journal (http://wmsu.edu.ph/research_journal/?page=home)

2. Measurement and Evaluation

Asia-Pacific Journal of Multidisciplinary Research (http://www.apjmr.com)
Asia Pacific Journal of Maritime Education (https://ejournals.ph/issue.php?id=884)
CNU Journal of Higher Education (https://www.facebook.com/cnujhe/; jheonline@cnu.edu.ph)
Development Education Journal of Multidisciplinary Research (https://ejournals.ph/issue.php?id=626)

Educational Measurement and Evaluation Review (https://www.pemea.org/emereview#:~:text=The%20Educational%20Measurement%20and%20Evaluation,refereed%2C%20and%20abstracted%2Findexed.)
Harvest (https://ejournals.ph/issue.php?id=1187)
ISU-Cabagan Journal of Research (https://ejournals.ph/issue.php?id=706)
JPAIR Multidisciplinary Research (https://philair.ph/publication/index.php/jpair/index)
LPL Research Journal (https://ejournals.ph/issue.php?id=632)
Philippine Journal of Counseling Psychology (https://ejournals.ph/issue.php?id=649)
SMCC Higher Education Research Journal (https://ejournals.ph/issue.php?id=966)
The Assessment Handbook (https://www.pemea.org/services1#:~:text=The%20Assessment%20Handbook%20is%20one,Educational%20Measurement%20and%20Evaluation%20Association.)
MSEUF Research Studies (https://ejournals.ph/issue.php?id=815)
TIP Research Journal (https://ejournals.ph/issue.php?id=1292)
UIC Research Journal (https://ejournals.ph/issue.php?id=1058)
UNP Research Journal (https://ejournals.ph/issue.php?id=963)

3. Sociology
Alipato: A Journal of Basic Education (https://www.journals.upd.edu.ph/index.php/ali)
Asia Pacific Journal of Education, Arts and Sciences (http://apjeas.apjmr.com/)
Asia-Pacific Journal of Multidisciplinary Research (http://www.apjmr.com)
Asia-Pacific Social Science Review (https://www.dlsu.edu.ph/research/publishing-house/journals/apssr/?fbclid=IwAR3WgOIa2BHZVruc8AeuShdNpRzTm_feMhYBxsbww5NbLT7k_2Hdv15rQ-I)
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DANYAG: Journal of Humanities and Social Sciences (https://pjssh.upv.edu.ph/)
ARETE International Journal of Liberal Art, Education, Social Sciences and Philosophical Studies (https://ejournals.ph/issue.php?id=1119)
JPAIR Multidisciplinary Research (https://philair.ph/publication/index.php/jpair/index)
LPU Laguna Journal of Multidisciplinary Research (https://lpulaguna.edu.ph/journal-multidisciplinary-research/)
Luz Y Saber (https://research-manila.letran.edu.ph/journal/2)
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Pamalandong (https://ejournals.ph/issue.php?id=643)
Philippine Journal of Social Sciences and Humanities (https://pjssh.upv.edu.ph/)
Philippine Social Science Review (https://www.journals.upd.edu.ph/index.php/pssr)
Recoletos Multidisciplinary Research Journal (https://rmrj.usjr.edu.ph/rmrj/index.php/RMRJ/about)
Social Sciences and Development Review (https://www.apcore-inc.org/pup-online-journal-system)
The Paulinian Compass [The Asia-Pacific Journal on Compassion Studies] (https://spumresearchcenter.wixsite.com/spumanilacompassion/large-grid)
UNP Research Journal (https://ejournals.ph/issue.php?id=963)

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Original scientific paper

THE IMPACT OF TEACHING MATERIALS ON INTERCULTURAL COMPETENCE DEVELOPMENT: A MIXED-METHOD STUDY

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Abstract. *This study employs a mixed-method quasi-experimental pretest-posttest design to investigate the mediatory effects of a culture-based teaching materials employing three types of teaching techniques, namely the cultural awareness, critical incident and cultural misunderstanding, in fostering intercultural competence (IC) development in a group of Tunisian higher education EFL students. A pedagogical intervention was implemented and evaluated in terms of its effectiveness in enhancing IC development in a voluntary group of 11 EFL-major students at a prominent Tunisian Higher Education Institute. Quantitative data were collected using pretests and posttests. Qualitative data were obtained from transcribed audio-recorded lessons, teacher fieldnotes, student diaries and post-course interviews. The results from the preintervention and postintervention tests and classroom observation indicate that the pedagogical intervention induced significant improvements on the three IC dimensions, namely knowledge, attitudes, and skills. The results from students' written artifacts and oral self-reports provide further support for the contributory effects of the three teaching techniques under investigation. The results of this work could form a knowledge base for future developments in course and teaching materials development.*

Key words: *intercultural competence, IC development, teaching materials, experiential learning*

1. INTRODUCTION

Several foreign language teaching (FLT) departments have started to incorporate intercultural competence (IC) into their educational curricula and programs. English as foreign language (EFL) and as second language (ESL) researchers and practitioners have realized the need for coherent curricular and pedagogical frameworks for language-and-culture teaching. The position most commonly defended in the literature gives relevance to a glocal approach that aims to "develop in the learners an intercultural competence that would shortchange neither their own culture nor the target culture, but would make them into cultural mediators in a globalized world" (Kramsch, 2013, p.57).

Stern (1992) and Damen (1987) offer a comprehensive overview of the techniques available for integrating culture in the language classroom. One line of research highlights the

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distinct value of experiential culture-driven scenarios and include a wide range of techniques, such as the cultural awareness technique (CAT), the critical incident technique (CIT), and the cultural misunderstanding technique (CMT) (Bhawuk & Brislin, 2000; Brislin & Cushner, 1996). These common problem-solving techniques have the advantage of providing authentic cultural situations that learners can easily relate to real life and personal experiences.

The literature presents several empirical classroom studies wherein pedagogical interventions were performed and the effects of training were measured qualitatively and/or qualitatively. Yang (2019) conducted a mixed method pre-test and posttest study to investigate the effectiveness of a self-produced CLIL culture coursebook in fostering the intercultural knowledge of higher education students in a Taiwanese polytechnic university. The findings indicated that the students underwent significant improvement in their cultural competence. Likewise, Kopylovskaya, and Ivanova (2014) explored the efficiency of global news reports in enhancing students' IC at Saint-Petersburg University. The authors concluded that global news reports had a significant potential for serving this purpose. Likewise, Lanucha (2018) investigated the importance of cultural competence for both native and non-native English students at the Language Unit in the Cambridge University Engineering Department. The results provided evidence on the effectiveness of cultural competence workshops in developing cultural competence.

Despite the large flow of data on IC instruction and assessment worldwide, little empirical work has so far been performed to explore the role of experiential TM in enhancing IC development. Accordingly, the present study aimed to investigate the mediatory effects of TM employing three types of experiential teaching techniques, namely the cultural awareness technique (CAT), critical incident technique (CIT) and cultural misunderstanding technique (CMT), on the promotion of IC development in an experimental group of Tunisian higher education EFL students.

2. Material and Method

The general research objective of the present study was to determine the effectiveness of language-and-culture training course incorporating three types of intercultural teaching techniques, namely the CAT, CIT, and CMT, in the enhancement of IC development in an experimental group of Tunisian higher education EFL students in terms of a) knowledge, b) attitudes, and c) skills. The general objective was subdivided into three specific research objectives (RO), namely a) RO1 aimed to determine the incoming students' IC levels in terms of the three components of IC (knowledge, skills and attitudes) prior to the pedagogical intervention; b) RO2 aimed to implement a pedagogical intervention (a training program consisting of TM containing CAT, CIT, and CMT); and RO3 aimed to evaluate the effects of the pedagogical intervention in terms of inducing improvements in participants' IC. The general hypothesis was that the implementation of the pedagogical intervention (using CAT, CIT, and CMT) would lead to significant improvements in students' IC (knowledge, skills, and attitudes).

The present study was carried out at the English department of a prominent Tunisian HEI. The latter had a large student population majoring in English (i.e., for whom the socio-cultural and pragmatic aspects are central). A total of 11 voluntary Tunisian EFL-major students were selected to form a single experimental group, 6 males and 5 females. They were from the 20-26 age category, 5 in their second year of a four-year EFL program and 6 in the third year. All

participants have been learning English for several years since elementary school. None of them had a stay-abroad experience in any English-speaking country. All participants experienced intercultural encounters with foreign tourists in Tunisia. They had an intermediate level of proficiency and never took any course related to IC prior to attending the training course. Participants in the experimental group, therefore, showed equal distribution on the scales of gender, age, and levels of proficiency, thus ensuring that a valid comparison in terms of those variables would be achieved. All ethical aspects and procedures were observed, and participants were assured of privacy and confidentiality.

The study adopted a mixed-method quasi-experimental single-group pretest-posttest approach based on a sequential three-phase design wherein the data collected in one phase informed the subsequent phase. The three phases of the study and their corresponding data gathering instruments are illustrated in Table 1.

Table 1 The three phases of the study

Three Phases of the study	Research instruments	Aims
1. Identification Phase	Pretest	Exploratory Phase: elicit information that can help construct a tentative profile of each incoming student prior to the pedagogical intervention
2. Implementation Phase		Course delivery phase: implement a training course that aimed to develop students' IC (knowledge, skills and attitudes).
3. Evaluation Phase	a. Audio-recorded sessions	Interpretation Phase: elicit information on potential a) classroom evidenced intercultural learning, and b) effects brought by the pedagogical intervention on participants' IC.
	b. In-class fieldnotes	
	c. Student reflective diaries	
	d. Posttest	
	e. Follow-up Interviews	

The quantitative phase of the study involved the administration of two tests. The first test was administered before the pedagogical intervention (pretest) and the second following the intervention (posttest). The pretest and posttest were the same. They had a tripartite structure. Part 1 of the test used CAT-based items to elicit information on the cognitive (knowledge) domain of IC. It contained two major sections that aimed to gauge information on two aspects of students' knowledge, namely (1) institutions, and perceptions of them; and (2) the processes and institutions of socialization in one's own country and that of the interlocutor. Section 1 contained two subsections (A & B) of 4 multiple-choice items targeting culture-general knowledge. These included the understanding of the concept of culture itself (Subsection A, Questions 1 and 2), the nature of cultural adaptation (Subsection A, Questions 3 & 4), the impact of culture on communication and the construction of meaning through language (Subsection B, Questions 1 & 2), the pressures involved in intercultural communication and how to deal with them (Subsection B, Question 3), and the role of identity in intercultural communication (Subsection B, Question 4). Section 2 consisted of six subsections (A-F). In all, it had 14 items consisting of a stem and possible responses in the form of multiple-choice, matching and error correction options targeting culture-specific knowledge. These

involved aspects from 'Big C' and 'small c' aspects culture. In brief, Subsection A focused on information related to British geography (Question 1), politics (Questions 2, 3 and 4) and popular food (question 5); Subsection B focused on popular events in the USA. Subsection B dealt with popular events in American history (Questions 1, 2, 3 and 4). Subsection C asked about famous people in American history (Questions 1, 2, 3 and 4). Subsection D consisted of questions on popular food in the USA (Questions 1, 2, 3 and 4). Subsection E consisted of questions related to awareness of the impacts of culture on communication, including understanding ways to address people (Question 1), react to false invitations (Question 2) and respond to phone calls (Question 1). Subsection F covered aspects of cultural awareness, including appropriate ways to apologize (Question 1), introduce oneself (Question 2) and inquire about health (Question 3).

Part 2 of the test used CMT-based scenarios to elicit information on the attitudes dimension of IC. It aimed to elicit data on two abilities, namely (3) willingness to seek out or take up opportunities to engage with otherness in a relationship of equality; and (4) interest in discovering other perspectives on interpretation of familiar and unfamiliar phenomena both in one's own and in other cultures and cultural practices. To gauge data on these competences, this part included an episode of a cultural misunderstanding where a problematic situation caused the interacting parties to become confused and offended due to ignorance of cultural differences. It asked the students to identify the problem and ascribe it to its causes. The assessment sought to elicit responses embodying the following broad categories of attitudes: willingness to 'decenter' affectively, that is, to 'relativize oneself' and value others' values, beliefs and behaviors (Question 1); willingness to seek out or take up opportunities to engage with otherness (Question 2); interest in seeing and experiencing cultural products or practices from an 'insider's perspective' (Question 3), readiness to 'suspend disbelief and judgment' with respect to others' meanings, beliefs and behaviors (Question 4).

Part 3 contained two sections. Section 1 aimed to elicit data on the attitudes dimension of IC using a CMT-based scenario. This item of the test described a problematic situation in an intercultural encounter between a non-native speaker and other natives where confusion and frustration arose. The students were asked to identify the problem and relate it to its underlying causes (Question 1), and to produce a written text in which they play the role of a 'mediator' between native and target cultures (Question 2). Section 2 aimed to elicit information on students' behavior in cultural interactions as revealed in their reflective writing. It used the critical incident technique (CIT) and required the students to reflect on a problematic scenario and make reactions and decisions as to (5) identify areas of misunderstanding and dysfunction in an interaction and explain them in terms of each of the cultural systems present, and (6) elicit the concepts or values of documents or events and develop an explanatory system susceptible of application to other phenomena.

The qualitative phase of the study sought to elicit information related to the RO3, namely evaluating the effectiveness of the pedagogical intervention in enhancing students' IC development. Qualitative data were obtained from a battery of data collection instruments. The researcher employed audio-recorded classroom sessions. Classroom recordings were meant to elicit four main areas, namely a) document classroom practices (topics, activities, techniques) and the role they might have played in achieving learning goals and objectives; b) capture discussions among students and between the students and the teacher that indicate actual classroom learning; c) record students' progress on three planes: cognitive, affective and behavioral; and d) trace students' progress over time.

The study also used brief in-class fieldnotes. The latter were used for three purposes, namely a) keep record of classroom phenomena that could not be documented otherwise, such as the atmosphere and mood during the sessions; b) jot down some instant reflections on the observed events, such as students' interactions and reactions to particular activities; and c) provide a reminder of the context of observed events, such as situation and task, needed for subsequent data analysis.

Moreover, participant students were encouraged to keep reflective diaries where they record and reflect on their daily learning experiences and progress over the two weeks of the pedagogical intervention. They were guided to include two major parts in their diaries. The first section inquired about self-perceived learning outcomes (part1; item 1 and 2). The second section required the students to reflect upon their planning for further learning (part 2: item 1 and 2), to express their reaction to the teaching tasks and activities (part 2; item 3 and 4), and to verbalize any perceived changes in their attitudes, beliefs and behaviors due to the course (part 2; items 3 and 4).

The evaluation phase included the administration of a posttest after the completion of the pedagogical intervention. The posttest had the same content described for the pretest and analyzed using the same procedures. The posttest scores were used to serve a dual purpose. They were intended to provide a baseline for comparison with the scores obtained on the pretest to see if any changes have occurred in response to the pedagogical intervention. They were also meant to serve as a springboard for evaluating the effects of the TM on the enhancement of IC development in the student participants.

Finally, the evaluation phase built on data obtained through individual 15-to-30 minute face-to-face semi-structured follow-up interviews seeking further information on the effectiveness of the pedagogical intervention from the participants' point of view. The researcher constructed a loose agenda that aimed to guide, but not direct, the interview. This included questions that invited participants to identify the a) parts of the training program that were helpful to them in retrospect and b) changes they saw in themselves in response to the pedagogical intervention.

The implementation phase corresponded to RO2, namely the realization of a pedagogical intervention. The intercultural training course developed to serve the purposes of the study is described in detail in a previous study by the author (Smaoui, 2021). In brief, the course builds on the basics of intercultural English as a Foreign Language (iEFL) and draws on Byram's (1997) framework of IC teaching and assessment. It aims to provide learners with the cognitive (knowledge), affective (attitudes) and behavioral (skills) tools needed to operate effectively in multicultural academic and professional settings by strengthening their skills in critical reading and writing. The program sought to achieve three major course learning outcomes (CLOs) framed within the three learning domains (knowledge, attitudes, and skills) described in the literature. The cognitive (knowledge) orientation of the course sought the development of students' knowledge of social groups and their products and practices in one's own and in one's interlocutor's country, and of the general processes of societal and individual interaction (Byram,1997). The affective (attitudes) orientation sought the development of curiosity & openness, readiness to suspend disbelief about other cultures and belief about one's own. The behavioral (skills) orientation sought the development of two aspects. The first was the skills of interpreting & relating, namely the ability to interpret a document or event from another culture, to explain it and relate it to documents or events from one's own. The second was the skills of discovery and interaction, namely the ability to acquire new knowledge of a culture and

cultural practices and the ability to operate knowledge, attitudes, and skills under the constraints of real-time communication and interaction. Two specific learning objectives were included under each orientation. The learning objectives for the knowledge component of IC learning included knowledge of a) the processes and institutions of socialization in one's own and in one's interlocutor's country; and b) institutions, and perceptions of them, which impinge on daily life within one's own and in one's interlocutor's country and which conduct and influence relationships between them. The learning objectives for the attitudes component of IC learning included a) willingness to seek out or take up opportunities to engage with otherness in a relationship of equality, distinct from seeking out the exotic or to profit from others; and b) interest in discovering other perspectives on interpretation of familiar and unfamiliar phenomena both in one's own and in other cultures and cultural practices. The learning objectives for the skills component of IC learning included the ability to a) identify areas of misunderstanding and dysfunction in an interaction and explain them in terms of each of the cultural systems present; and b) elicit from an interlocutor the concepts or values of documents or events and develop an explanatory system susceptible of application to other phenomena.

The intercultural training program consisted of six teaching units (3 units per week) corresponding to six culture-related topics, namely a) values, norms and beliefs, b) cultural contact, c) customs and traditions, d) marriage, e) prejudices and stereotypes, and ethnography. Classes took place over a period of 12 days (Monday to Saturday for 2 weeks). Students were required to attend 2 morning classes of 45 minutes per day, with a 15-minute break in between. Coursework included a wide range of experiential learning activities (CAT, CIT, and CMT) that engaged the cognitive, affective, and behavioral dimensions of the learning process. Training sessions followed the same procedures. Table 2 illustrates the main instructional and assessment features employed in Unit 1.

A posttest was administered immediately after the pedagogical intervention. Students' responses to the test items were assessed using a simplified version of the assessment sheet provided in the INCA (2004) assessment manual as previously described in Smaoui (2021). In brief, an assessment sheet was prepared, containing a list of the IC dimensions to be assessed (criteria) and an illustrative system of categories (descriptors) that describe each level of competence, corresponding to three levels of performance, namely 'basic', 'intermediate' and 'advanced' (scale). To make assessment more manageable and looking for an assessment approach that is applicable to the Tunisian context, a scoring scheme was devised, with fixed marks for different items in the test. The marking scheme assigned points for different types of questions on the test. Accordingly, a maximum mark was calculated for each individual part in the test, and the marks were then combined to determine a total score for the whole test. The knowledge part of the test included items that could be immediately measured quantitatively. The latter were scored using a scale from 0 to 1. In other words, '1' mark designates the presence of an appropriate response, and '0' mark denotes its absence. Considering that this part of the test contained 31 items, the maximum possible score for the knowledge dimension was calculated as 31. The attitudes part of the test included items that were qualitative in nature. Responses to these items were first submitted to content analysis, using a list of categories and descriptors, and then converted into quantitative data. Each emerging element was scored on a scale ranging from 1 to 2. A score of 1 was indicative of a 'basic' level response, a score of 1.5 to an 'intermediate' level response, and a score of 2 to a 'advanced' level response. Considering the that the test contained 4 items from the attitudes dimension, the maximum score for the attitudes part of the test was calculated as 8. Similarly,

Table 2 The main pedagogical and assessment features of Unit 1

Unit 1: Values, norms and beliefs	
Description	Procedure
Learning outcomes	By the end of this unit students will able to: ▪ identify and describe the concept of culture; ▪ describe and link visible and invisible aspects of culture; ▪ relate and contrast personal, cultural and universal attributes; ▪ articulate well-informed viewpoints on cultural identity and diversity; ▪ show awareness of the uses and abuses of stereotypes; and ▪ show interest, openness and curiosity regarding diversity.
Enabling Objectives	In this unit students will: 1. Discussion of the iceberg model of culture. In particular: a. What is the significance of an iceberg image? b. What aspects of cultures are visible and what are less visible? 2. Discussion of the onion metaphor of identity. In particular: a. What is the significance of an iceberg image? b. What aspects of identity are personal, cultural, and universal? 3. Discussion of cultural stereotypes: a. What does stereotyping mean? b. Does it provide a useful way of thinking about people? c. Is a nation a culture?
Content	▪ The iceberg metaphor of culture; ▪ Personal, cultural and universal dimensions of culture; ▪ The onion metaphor of culture; ▪ The uses and abuses of stereotypes; ▪ Cultural identity and cultural diversity;
Activities	▪ Reading/writing ▪ CAT: individual work; Pair work; group work ▪ CMT: whole class guided discussions ▪ CIT: speaking activity; writing
Types of assessment	▪ Assessment For learning and Assessmet AS learning
Kind of evidence	▪ Factual knowledge elicited by question/answer in the readings; ▪ Deep learning knowledge elicited by guided discussions; ▪ Observation of students' knowledge, attitudes, skills in critical thinking and suspending disbelief during speaking activities; ▪ Responses to an in-class questionnaire; ▪ Writing compositions.
Materials	▪ Handouts ▪ Worksheet: in-class questionnaire ▪ Worksheet: What Did I Learn Today? ▪ Laptop, power point, data show

the skills part of the test contained qualitative items. Responses to those items were first submitted to the same content analysis procedures and then scored on a scale ranging from 1 to 2. A score of 1 was assigned to 'basic' level responses, a score of 1.5 was assigned to 'intermediate' level responses, and a score of 2 was assigned to 'advanced' level responses. The responses to the three multiple choice items embedded in this part of the test were scored on a scale of 0 to 1, thus making the maximum score for the skills part of the test as 11.

The assessment sheet was designed in a way to indicate each participant's competence level in terms of the three separate IC strands. The overall level for an individual strand is determined by combining the total marks obtained for the items belonging to that strand of interest. The scores obtained on the three stands were then combined to get a total score for the whole test. For the sake of numerical assignment and interpretation, a knowledge score in the range of 0-16 was taken to reflect a 'basic' level; a score of 17-25 an 'intermediate' level; and a score of 26-31 a 'advanced' level. An attitude score in the range of 0-3 was taken to reflect a 'basic' level; a score of 4-6 an 'intermediate' level; and a score of 7-8 an 'advanced' level. A skills score in the range of 0-3 was taken to reflect a 'basic' level; a score of 4-8 an 'intermediate' level; and a score of 9-11 an 'advanced' level'. Furthermore, a total score in the range of 0-24 was taken to reflect a 'basic' level; a score of 25-40 an 'intermediate' level; and a score of 41-50 an 'advanced' level. The numerical assignments followed the INCA scale, that is: basic = 1, intermediate = 2, advanced = 3. Qualitative data were submitted to content analysis procedures. Quantitative data were analyzed using IBM's Statistical Package for Social Sciences (SPSS) for Windows software (trial version 22.0; IBM SPSS Statistics).

3. Results and Discussion

The results generated through the qualitative and quantitative instruments are discussed considering the research questions and theoretical framework presented above.

3.1. Quantitative Results

All participants completed the pretests and posttests (n = 11). The results from one-way ANOVA revealed no significant differences in student responses to the test across the research variables. The results from a paired samples test (Table 3) revealed a significant difference between the score mean values registered for the pretest and posttest at a 0.05 level of significance ($P \leq 0.05$), with the posttest mean (M= 38.3) significantly increasing to a higher level compared to the pretest mean (M= 28.3) in all IC dimensions. Further comparison of means revealed that the most significant improvements were recorded for the behavioral (from M= 3.4 to M= 7.2) dimension, followed by the cognitive (from M= 21 to M= 24.9), and affective (from M= 3.9 to M= 6.1) dimensions, respectively.

Table 3 Paired Samples Test

	Paired Differences							
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1 T1 Total - T2 Total	-10.00000	5.54977	1.67332	-13.72839	-6.27161	-5.976	10	.000

The results showed marked differences in all the key performance indicators of both tests (Table 4). Firstly, the mean value for the scores recorded for the pretest was M= 28.3 compared to M= 38.3 for the posttest. There was also a notable difference of 4 in the range values of the two tests (pretest, R=11; posttest, R=15). The standard deviation for

both tests was also different (Std= 4.6 for the pretest; Std= 3.6 for the posttest). While the pretest displayed slightly positive skewness (.014), the posttest displayed negative skewness (-.120), suggesting that the scores were skewed to the left. In both cases, however, the score distribution was normal, as the skewness value was very close to zero. Both tests exhibited slightly negative kurtosis values (-.649 for the pretest; -1.259 for the posttest), suggesting that the scores distribution tended to be flat. In fact, both cases showed normal score distribution, as the kurtosis and skewness values were close to zero.

Table 4 Comparison of key performance indicators of pretest and posttest results

		T1 Knowledge	T1 Attitudes	T1 Behavior	T1 Total	T2 Knowledge	T2 Attitudes	T2 Behavior	T2 Total
N	Valid	11	11	11	11	11	11	11	11
	Missing	0	0	0	0	0	0	0	0
Mean		21.0000	3.9091	3.4545	28.3636	24.9091	6.1818	7.2727	38.3636
Std. Error of Mean		.79772	.43598	.49293	1.39005	.31492	.37703	.67542	1.11415
Std. Deviation		2.64575	1.44600	1.63485	4.61027	1.04447	1.25045	2.24013	3.69521
Variance		7.000	2.091	2.673	21.255	1.091	1.564	5.018	13.655
Skewness		1.188	-.537	-.573	.014	.213	.713	-.090	-.120
Std. Error of Skewness		.661	.661	.661	.661	.661	.661	.661	.661
Kurtosis		1.663	-.010	.982	-.649	-2.444	-1.123	-1.534	-1.259
Std. Error of Kurtosis		1.279	1.279	1.279	1.279	1.279	1.279	1.279	1.279
Range		9.00	5.00	6.00	15.00	2.00	3.00	6.00	11.00
Minimum		18.00	1.00	.00	21.00	24.00	5.00	4.00	33.00
Maximum		27.00	6.00	6.00	36.00	26.00	8.00	10.00	44.00

The results informed that the total scores obtained for the pretest (three parts combined) ranged from a minimum score of 21 to a maximum of 36. The mean values recorded for student responses revealed that although not all students scored above the average, the mean value of students' scores was M= 28.3. Almost one quarter of the students (27.3%) scored below the average score of 25, therefore displaying a 'basic' IC level. By extension, almost three quarters (72.7%) scoring above the average, thus displaying an 'intermediate' IC level. On the other hand, the findings indicated that the total scores gained on the posttest ranged from a minimum of score of 33 to a maximum of 44. The mean value recorded for the posttest was M= 30.3. A comparison between students' total scores on the pretest and posttest is illustrated in Figure 1.

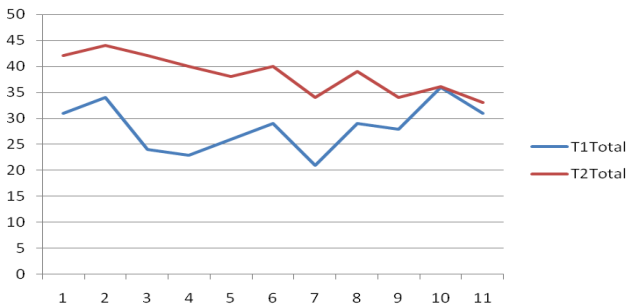

Fig. 1 Students' Total scores on the pretest (T1) and posttest (T2)

The results indicated that all the students' total scores on the posttest were above the average of 25, with 45,5 % of the students scoring 40 or higher. Accordingly, it could be concluded that 72.7% of respondents displayed an 'intermediate' competence and 27.3 % exhibited an 'advanced' competence. The posttest scores obtained for the three IC dimensions are illustrated in Figure 2.

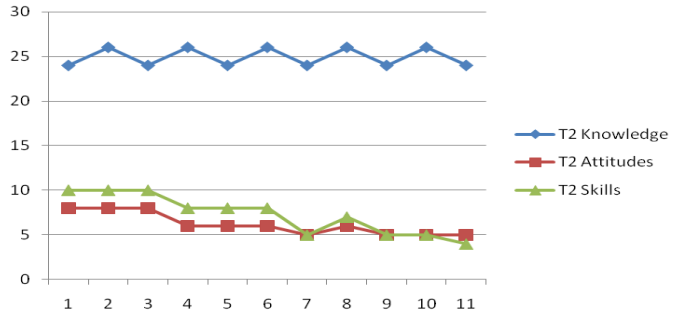

Fig. 2 Students' knowledge, attitudes and skills scores in the posttest (T2)

The case summary report (Table 5) revealed that the posttest scores were higher than their pretest scores, which was true for the total scores as well as for the scores for each of the three separate parts of the tests. No students were noted to obtain the same total pretest and posttest scores, and no students were noted to obtain lower total scores nor lower scores on one of the three constituent parts of the test, except one student (pseudo: Sammy) whose score on the behavior dimension of the test was noted to drop from 6 to 4. Further analysis showed, however, that the student left some sections in this part of the test, and his total score on the posttest improved compared to the pretest.

Table 5 Case Summary report

			T1K	T1A	T1B	T1Total	T2K	T2A	T2B	T2Total
Pseudo	Abe	1	20.00	6.00	5.00	31.00	24.00	8.00	10.00	42.00
	Bobby	1	24.00	5.00	5.00	34.00	26.00	8.00	10.00	44.00
	Cathy	1	18.00	3.00	3.00	24.00	24.00	8.00	10.00	42.00
	Davy	1	19.00	1.00	3.00	23.00	26.00	6.00	8.00	40.00
	Fancy	1	21.00	3.00	2.00	26.00	24.00	6.00	8.00	38.00
	Heidi	1	21.00	5.00	3.00	29.00	26.00	6.00	8.00	40.00
	Jamie	1	18.00	3.00	.00	21.00	24.00	5.00	5.00	34.00
	Mimie	1	20.00	5.00	4.00	29.00	26.00	6.00	7.00	39.00
	Nancy	1	21.00	4.00	3.00	28.00	24.00	5.00	5.00	34.00
	Ryrie	1	27.00	5.00	4.00	36.00	26.00	5.00	5.00	36.00
	Sammy	1	22.00	3.00	6.00	31.00	24.00	5.00	4.00	33.00
	Total	N	11	11	11	11	11	11	11	11

The findings indicated that the scores recorded for the knowledge part of the pretest ranged between a minimum score of 18 and a maximum score of 27, with a mean value of M= 21. Taking the assessment scale used in the present work into account, 90,9 % of respondents were noted to display an 'intermediate' level and 9.1 % to an 'advanced' level of knowledge competence. By contrast, the scores obtained in the posttest ranged

between 24 and 26, with a mean value of (M= 24.9). It could, therefore, be inferred that 54,5 % of respondents showed an 'intermediate' level and 45,5 % an 'advanced' level of knowledge. A comparison between students' scores on the knowledge part of the pretest and posttest is illustrated in Figure 3.

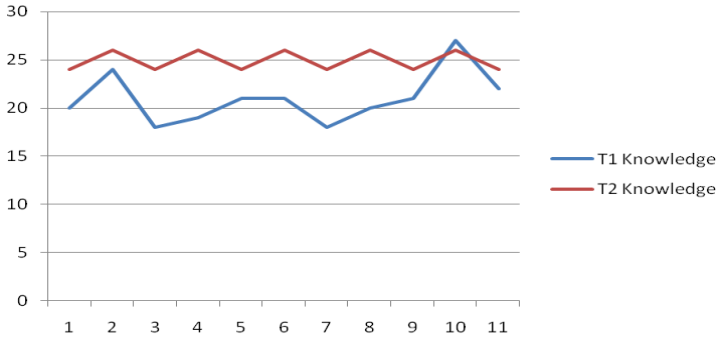

Fig. 3 Students' scores on the knowledge component of IC (T1: Pretest; T2: Posttest)

The results related to the attitudes dimension of IC revealed that the pretest scores ranged between a minimum score of 1 and a maximum score of 6, with a mean value of M= 3.9. Based on the rating scale employed, 45,5 % of respondents belonged to the 'basic' level and 45.5 % to the 'intermediate' level of attitudes. By contrast, the scores obtained in the posttest ranged between 5 and 8, with a mean score of (M= 6.1). It was possible to conclude that 36,4 % of students displayed an 'intermediate' level and 27,3 % an 'advanced' level of attitudes. A comparison between students' scores on the knowledge part of the pretest and posttest is presented in Figure 4.

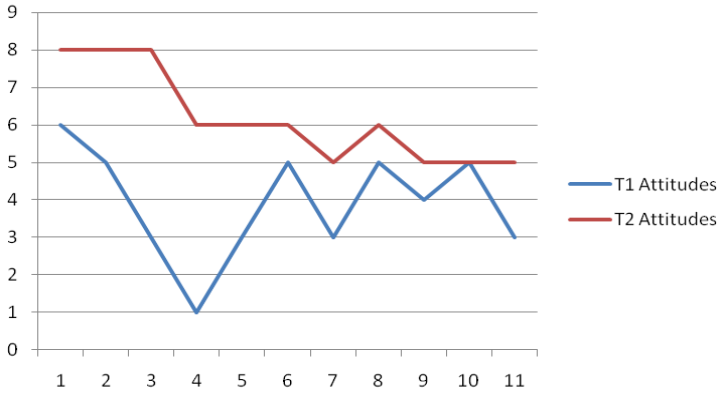

Fig. 4 Students' scores on the attitudes component of IC (T1: Pretest; T2: Posttest)

The results obtained for the skills dimension of IC revealed that the pretest scores ranged between a minimum score of 0 and a maximum score of 6, with a mean value of M= 3.4. It was, therefore, inferred that 54,5 % of respondents exhibited a 'basic' level, and 45.5 % an 'intermediate' level of skills. By contrast, the scores obtained in the

posttest ranged between 4 and 10, with a mean score of 7.2. This revealed that 9,1 % of respondents displayed an intermediate level and 90,9 % an advanced competence of skills. A comparison between students' scores on the knowledge part of the pretest and posttest is displayed in Figure 5. The minimum and maximum scores recorded for the whole test and for the three distinct parts of the test are summarized in table 3 above.

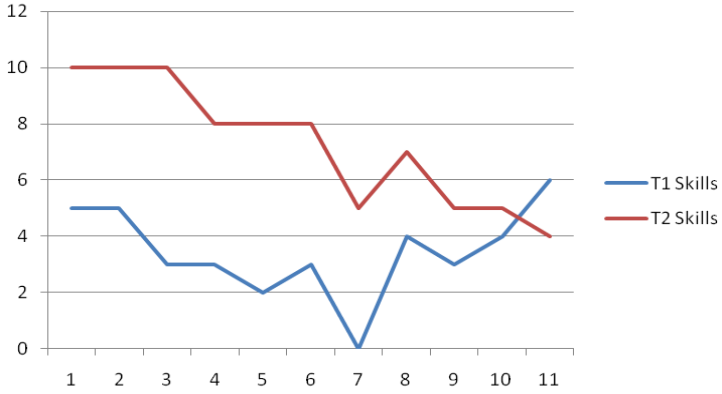

Fig. 5 Students' scores on the skills component of IC (T1: Pretest; T2: Posttest)

The results yielded strong evidence in support for the positive effects of the pedagogical intervention on learners' overall scores. In fact, the findings demonstrate that the maximum progress was achieved in the skills dimension, while the minimum was achieved in knowledge. Similar results were previously reported by Mason (2010) who described that the most effective results were attained with students' affective and behavioral skills. The significant progress in attitudes and skills was, in fact, logical as it reflects the ease of several stereotypes and prejudices that foreign language learners generally possess simply by providing them with experiential learning opportunities.

Overall, the results indicated that students' scores on the knowledge dimension of IC underwent a significant improvement (from 9.1 % belonging to the 'advanced' level of knowledge in the pretest to 45,5 % in the posttest). Students' scores on the attitudes and skills components also underwent marked improvements (from 0% belonging to the 'advanced' level to 27,3 % and 90,9 % belonging to the advanced level of attitudes and skills, respectively). The relevance of the experiential learning activities to the enhancement of IC development can be evidenced by the noticeable change observed in terms of students' scores on the three dimensions of IC over the course of the study.

4.2. Qualitative results

Three major themes emerged from qualitative data, namely a) learning the covert aspects of culture, b) valuing personal experience, and c) experiencing personal change. There were several instances where participants highlighted the value that the training course added to their learning about the covert aspects of culture. The findings indicated that participants were actively engaged in interpreting behavior from the insider's and outsider's perspectives and drawing comparisons and contrasts between cultures. Students' self-reports also reflected a variety of learning gains from the pedagogical

intervention, particularly in terms of recognizing the covert aspects of culture and their impacts on human behavior and practice. Moreover, the data revealed several occasions where the students linked the learning experiences to their own previous personal experiences and how they started to revalue them in retrospect. Of particular importance, the data reflected participants' growing awareness of the conducive role that sharing personal experiences could play in relation to becoming intercultural, which is in line with several research studies in the literature (Deardorff; 2006; Byram, 1997). Likewise, the data revealed several occasions where participants explicitly referred to experiencing moments of personal change and how they valued them, in ways that echoed Byram's (1997) notions of 'leaps in insights' and 'shifts in perspective'.

Overall, qualitative results provided ample evidence in support for the mediatory effects of the CAT, CMT and CIT based TM in the enhancement of IC development in student participants. The findings indicated that the three techniques provided students with opportunities to acquire knowledge, attitudes and skills that mimic the intercultural experience of visiting the target cultures, an experience not easily available for several EFL learners. Classroom observation and students' self-reports on the learning experiences showed that culture-based scenarios helped the learners to develop expectations about how to deal with such situations in potential encounters with a new culture. These findings are encouraging considering the findings of Abid (2018) who reported that current Tunisian EFL textbooks do not play the role of cultural mediators for IC development. The results indicated that the CAT, CMT and CIT can be considered as potential strong candidates for consideration in future reforms related to textbook and material design in Tunisia and elsewhere.

4. CONCLUSION

The results presented in this study indicated that the culture-based TM were conducive to the development of the cognitive, affective and behavioral dimensions of IC. The findings also revealed that EFL teachers can enact interculturality in a wide range of pedagogical choices and practices, including the use of TM that offer connections between language and culture and the creation of learning experiences and environments that lend themselves to experiential learning, leading students to learn about the target culture while experimenting with the target language and urging them to engage in interculturality. Building on the findings presented here, HEIs need to give greater attention to the conceptual understanding of IC and the methods of IC development and assessment, both in terms of teacher training courses and in-service teacher development initiatives. It seems also imperative to refer to IC explicitly in EFL syllabi and curricula and to offer maximum experiential learning opportunities for optimal IC development. Overall, the results of the present work could serve as a springboard for further research on curricular developments in the local and global EFL contexts and could form a promising foundation and blueprint for future projects on designing TM and activities for IC development and assessment.

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Original scientific paper

EXPLORING THE SOCIAL CONSTRUCTION OF FOOTBALL COACHING BY A PROFESSIONAL FOOTBALL COACH: TOWARD THE DEVELOPMENT OF ENGLISH PEDAGOGICAL RESOURCES FOR SPORTS

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Abstract. *Globalization has had a significant impact on the field of sports. In Japan, an increasing number of football coaches are looking overseas for career opportunities; however, they face numerous obstacles when attempting to accomplish their goals, including language barriers, cultural adaptation, and competition-specific misalignments. This study aimed to develop language teaching materials specifically designed for football coaches interested in pursuing professional careers abroad in the future. For this purpose, this study conducted a preliminary investigation of how a Japanese football coach interacted in English with players in an academy team of an Australian professional football club. The coaching behavior was analyzed using a qualitative data analysis method called the modified grounded theory approach (M-GTA). The results revealed the coach's training process, which began with an explanation of the purpose and procedure of the training, followed by feedback on the training and temporarily suspending the training to correct the players' errors. The coach's unique technique involved using repeated initiation, response, evaluation, and clarification (IRE-C) interactions with the players, primarily questioning them to elicit consideration of methods to enhance their performance, followed by gentle guidance toward a solution. The findings had several pedagogical implications. First, the repeated generic structure and linguistic features identified in the coaching process could form foundational resources for developing ESP materials. Second, rich contextual information surrounding the obtained linguistic data, such as the coach's mindset and coaching philosophy, could reveal how language is used and help construct meaning in authentic football coaching situations.*

Key words: *English for sports, coaching skills, Japanese abroad, performance enhancement, training pedagogy, personal development*

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1. INTRODUCTION

Owing to globalization, the number of locations where individuals can engage in sports has expanded proportionately. It can be said that football, which refers to soccer in this study, is leading the globalization of sports in Japan, where the author is based. As of 2016, the Japan Football Association (JFA) had 19 Japanese staff members working as national team managers, coaches, or referee instructors in Asian countries (Japan Football Association 2016). In addition, Poli, Ravenel, and Besson (2019) reported that 128 players from Japan, more than those from any other Asian country, were pursuing their professional careers outside of Japan. However, when exposed to different countries and cultures, they are likely to experience various challenges. Nishijo (2016) conducted a questionnaire survey of Japanese football players and coaches staying in the state of New South Wales, Australia. In response to questions surveying the troubles they had been facing, approximately half the respondents expressed concerned about language and communication. Tsuji (2013) pointed out various factors that perplexed Japanese student athletes overseas, including the language barrier, different football skills required by local teams, and the local coaches' disparate coaching styles which made it difficult for them to be successful in their chosen fields.

Indeed, as an increasing number of people from Japan move overseas, several support programs and educational materials have been created for them, mainly by private companies, focusing especially on developing language proficiency. However, the effects of these resources developed by the organizations on learners' language development have not been fully evaluated. Whether and to what extent existing materials and resources help student-athletes develop language abilities and improve their performance in a foreign language context remains unknown. To better address the needs of international students in the field of sports, the quality and effectiveness of existing methods and curriculum design must be systematically and thoroughly examined.

The purpose of this case study is to investigate the coaching skills of a Japanese professional football coach who works abroad, with the ultimate goal of developing language teaching materials for tertiary education to help students interested in football coaching abroad.

2. LITERATURE REVIEW

Teaching methods that aim to enable students to use English in specific situations have been widely studied in the disciplinary area of English for Specific Purposes (ESP; Paltridge and Starfield 2013). The ESP approach to teaching and learning the target language is underpinned by the genre theory proposed by Swales (1990), who defined genre as structured communicative events engaged in by specific discourse communities whose members share broad communicative purposes. Following Swales, many ESP scholars have examined how communicative purposes are conveyed in textually conventionalized ways by members of a particular discourse community who regularly participate in a specific genre and share similar communicative purposes (e.g., Belcher 2004; Bhatia 1991; Flowerdew 2005; Hyland 2004; Paltridge 2004). Specifically, ESP genre practitioners believe that communicative purposes are expressed in a sequenced manner, with a text being built up schematically through a series of moves and steps (Swales 1990). In this vein, ESP genre research focuses on the social context or regularly occurring activities in academic, professional, and workplace settings. Consequently, rather than examining elemental genres or text types, such

as recount, description, and explanation, ESP theorists are more interested in macrogenres, such as term papers (Mustafa 1995), science papers (Hammond and Macken-Horarik 1999), reports (Flowerdew 2005), exegesis (Paltridge 2004), film reviews (Pang 2002), tourist information (Ellis et al. 1998), care plans (Gimenez, 2008; Leki, 2003), sales letters (Bhatia 1991), and e-mails (Szabó 2014). These genres are valued as disciplinary discourses within specific discourse communities where communicative purposes are specified. Disciplinary discourses within the ESP framework encompass "thinking and talking like an engineer (or biologist, or philosopher, and so on)" (Tardy 2009, 11). From the ESP perspective, genre is viewed as more than language; it is a conventionalized disciplinary way of being/identity, which involves not only language, but also discourses that "shape our perceptions of the world, including how we communicate, act, interact, and understand" (Tardy 2009, 11).

Drawing on the notion of genre, a language teaching method called the genre-based approach (GBA) has played a central role in classroom language teaching. The genre-based perspective focuses on language at the level of the whole text while taking into account the social and cultural contexts in which it is used. The goal of GBA is to guide students "toward a conscious understanding of target genres and the ways language creates meanings in context" (Hyland 2004, 21) and provide students with explicit, systematic explanations of the ways that language functions in social contexts (Hyland 2004). For this purpose, the GBA adopts authentic teaching materials, including materials produced by and for native speakers with communicative purposes, as these materials reflect the type of language people may actually use in natural situations outside the classroom (Burns, Joyce, and Gollin 1996; Goh and Burns 2012).

Several studies have revealed the characteristics of language use in authentic sporting situations. Goh and Burns (2012) analyzed the utterances of spectators watching a basketball match and noted that describing events occurring in front of the speaker do not require direct reference to the context, as utterances are produced in relation to the immediate action of the game, resulting in a much lower use of content words. Nishijo (2018) used the theory of systemic functional linguistics as an analytical tool to identify the linguistic features of mood and modal assessment systems in five sets of English coaching texts produced by a professional football coach. Wegener (2018) analyzed the speech act and sentence structure of the utterances of basketball team coaches in American universities and discovered regular patterns of speech used by coaches when talking to their players. These studies suggest that specific linguistic features may be extracted by analyzing the utterances of football coaches. Furthermore, these studies shed light on the interaction between coaches and players, who share the same first language, namely, English. However, language use in interactions between coaches who are non-native speakers (NNS) and players who are native speakers (NS) has not been examined.

Language is a semiotic tool for accomplishing a task based on relevant social goals and is formed and shaped by contextual needs (Eggins 2004; Goh and Burns 2012; Halliday 1994). Therefore, to create ESP materials and resources, it is first necessary to delineate the contextual information of football coaching and identify actions taken by football coaches to improve their players' performance in intact football training sessions. A context is comprised of social and cultural beliefs and ideologies, such as opinions, voices, or viewpoints in relation to the reality being talked or written about (Halliday 2020; Hasan 1985). This exploration of the relationship between language use and context is critical, as the "situation in which words are uttered can never be passed over as irrelevant to the linguistic expression, and the meaning of any single word is to a very high degree

dependent on its context" (Malinowski 1946, 307). Thus, this study began by conducting a literature review of extant analyses of the contexts of sports coaching.

For most of the twentieth century, the study of sports coaching known as "coaching science" was a subset of sport science, with contributions from sport physiology, sport psychology, and biomechanics (Gilbert and Trudel 2004; Potrac et al. 2000). Coaching science includes research on coaching, learning, and instructional processes (Gilbert and Trudel 2004; Potrac et al. 2000). Most coaching science research has used a quantitative, product-oriented epistemology, in which quantitative methods such as questionnaires, scales, and systematic observation instruments have been used. These are characterized by deductive reasoning, random sampling, large sample sizes, and statistical data analysis tools (Gilbert and Trudel 2004). The Arizona State University Observation Instrument (ASUOI), for example, has traditionally been employed as an observational tool to quantitatively identify the behavioral patterns of coaches during training (Evans 2017; Potrac et al. 2000). Using 10 different behavioral categories consisting of instruction, questioning, manipulation, modeling, hustle, praise, scold, management, use of first name and other, the ASUOI enables researchers to quantify coaching practices, compare them across a wide range of settings, and create generalized models of the coaching processes (Evans 2017; Potrac et al. 2000). According to previous systematic observations using the ASUOI, instruction was the most frequently observed coaching behavior across coaches with different variants.

Several studies have compared sports coaches from diverse backgrounds, indicating that coaching styles vary by cultural background. Chelladurai et al. (1988) explored the differences between Japanese and Canadian university-level male athletes in their leader behavior preferences, perceptions of leader behaviors, satisfaction with leadership and personal outcomes, and the relationship between leader behaviors and satisfaction. The Japanese athletes preferred more autocratic behavior, structured instruction and expectations, and social support, while Canadian athletes preferred significantly more training and instruction, indicating that these varied coaching preferences originating from different cultural backgrounds may influence coaching behavior as well (Chelladurai et al. 1988).

Today's coaching scholars are more concerned with understanding sports coaching in its sociocultural context than the traditional "realistic" and "decontextualized" approach (Jones, Armour, and Potrac 2002; Potrac et al. 2000; Potrac, Jones, and Cushion 2007). Recognizing coaching as a complicated social activity is critical to the coaching science paradigm shift. For instance, ethnomethodology (EG) and conversation analysis (CA) are two related methodologies to study social behavior that aim to reveal the nature of how members of society create the identifiable, ordered features of social life in real time (Potrac, Jones, and Cushion 2007). Using the CA method, Cope et al. (2016) identified a coaching technique used by football coaches, initiated using questions known as Coach Questioning Practices (CQPs), which has been recognized as an effective coaching technique to increase players' problem-solving and decision-making skills. Cope et al. (2016) also pointed out that a three-part discourse pattern typical of school classrooms appears in the CQPs of football coaching: teacher initiation, student response, and teacher feedback, commonly known as IRF or IRE: Initiation, Response, Feedback/Evaluation.

To identify the pedagogical strategies of a football coach within the training environment, Potrac et al. (2002) used an interpretive interview technique, as well as an observational tool, to investigate how such behaviors were influenced by social, contextual, experiential, and social factors. This study concluded that the subject's coaching practice was influenced by his

perceived need to create a strong social connection with his players, a bond built on the players' respect for his professional knowledge and personal manner (Potrac et al. 2002).

As indicated above, the significance of this research will be enhanced by taking into consideration the social and cultural dimensions of language teaching and coaching science.

The participant in this study is a Japanese football coach, who speaks English as a second language, currently employed as a full-time academy coach in an English-speaking country. He would be a good role model for Japanese learners participating in the pre-learning program that this study aims to develop. His instructional language, English, is not his mother tongue, and the nationality of the players he coaches is different from his, which is distinct from the traditional research context of sports coaching. Therefore, it is necessary to conduct an exploratory hypothesis-generating investigation of this new coaching context, necessitating the use of qualitative research methods (Sueta 2012). While this type of descriptive research is often considered rather elementary, it is essential for developing a foundation for higher levels of research (Potrac, Jones, and Cushion 2007).

From the two aforementioned pedagogical viewpoints, it is necessary to perform an exploratory inquiry into what football coaching looks like in the learners' target context. Thus, this study aimed to answer the following research question: How does a Japanese football coach communicate with local players overseas to improve football performance in training sessions?

3. METHODS

3.1. Participants

The participant in this study was Coach Micky, a Japanese professional football coach. He wanted to be a professional football player as a child but chose to become a coach instead. He went to college and majored in sports science, completing a master's thesis on the situational judgment of goalkeepers. He coached in high schools and J-League clubs during his studies and was an assistant at Albirex Niigata Singapore for two seasons. In 2016, he joined the Sydney FC Academy in Australia as a goalkeeper coach.

He was chosen for this study through purposive and convenience sampling (Ohtani 2019), primarily because his coaching context (coaching players in English, which is not his mother tongue) is analogous to the ones in which the learners that this research project aims to help will find themselves. Informed consent was obtained from him prior to the commencement of the study.

3.2. Data Collection

3.2.1. Coaching Behaviors

The data on Micky's coaching behavior were collected over 2 days, August 15–16, 2017, in Valentin Sports Park, New South Wales, Australia, where Sydney FC's U-15 Academy is located. Micky and the director of the Sydney FC Academy agreed to participate in the study and I was authorized to videotape Micky's 2-hour daily training sessions. The first day's training comprised a 3 v 1, shot saving, and a practice game. The second training day consisted of a warm-up game and ball-catching drill. Jacob, Harry, and Steve were the goalkeepers during training. The first day's 3 v 1 training scene was chosen for examination because it contained many interactions between Micky and the players,

allowing us to investigate how Micky conducted football coaching for the local players in Australia. The video data used in the study were 60 min long.

3.2.2. Coaching Philosophy and Contextual Needs

I conducted a formal interview with Micky after examining his coaching process to inquire into the influence of contextual elements, including his previous coaching experience, coaching philosophy, and mindset, on his coaching behaviors. This helped uncover the why rather than just the what of the coach's behavior (Potrac et al. 2000), shedding light on the interplay between the coach's language use and the target contextual needs. The interview lasted approximately 80 min. It began with general information on the project's objective and progressed to background and demographic issues. Following these introductory questions, open-ended questions were used to elicit information about the experiential, contextual, and situational aspects that Micky regarded as influencing his instructional behaviors in practice environments. Zoom was used because of the COVID-19 pandemic in 2020 and 2021. The interviews were recorded and transcribed to ensure a thorough and accurate record.

3.3. Analytical Framework

Tools such as ASUOI have been utilized to acquire a general picture of coaches' behaviors across all competition types. However, such a linear classification of coaching behaviors over time is based on a single level of abstraction for the coach's behaviors during a given training session and does not allow us to study how each behavior is connected in a multilayered and hierarchical manner.

This study used the modified grounded theory approach (M-GTA) as an analytical tool, a modified version of the grounded theory developed by Kinoshita (2003), to provide an overall view of Micky's coaching process. The original version of the Grounded Theory Approach (GTA) was proposed in the 1960s by two sociologists, Glaser and Strauss (1967). This method builds a theory from a phenomenon by extracting concepts from interviews or text data and focusing on their relationships. The M-GTA seeks to be more "data-driven" by implementing a new procedure (Kinoshita 2003).

The M-GTA "emphasizes the contextuality of the data without discarding it" (Kinoshita 2007, 30). Analysts must also "verbalize their ideas" using analysis worksheets to clarify the concept development process (30). The purpose of M-GTA analysis is to generate "explanatory concepts" from data and then develop a "coherent theory" from these concepts (35). Analyzing coaching behavior using M-GTA allows us to see how the various coaching behaviors discovered in previous studies work together to contribute to the completion of coaching from a new perspective. Thus, M-GTA allows for a hierarchical and multidimensional examination of coaching behavior.

3.4. Procedure of Analysis

First, an analytical theme, which is equivalent to a research question, must be composed (Kinoshita 2012). Since this study examines a football coach's coaching behaviors, the analysis theme is "Coaching Process in Each of the Three Coaching Contexts." Second, an analytically focused person in the M-GTA is the subject of the analysis, which in the present study corresponds to Coach Micky. All coaching data were

entered into N-vivo for qualitative analysis, and concepts were developed (Kinoshita 2012). In the M-GTA analysis, the researcher must build concepts from scratch, free of preexisting notions. When the final results were presented, the coding results were evaluated again, and those whose definitions were similar to those of the behaviors observed in earlier studies were changed to the same names. Because this study's purpose was to evaluate the hierarchical structure of coaching behaviors, the same category or concept name was written in several places. They were then categorized, and finally, core categories were developed. To examine coaching behaviors in more depth, sub-concepts that do not originate in the M-GTA were created in the lower level of the concepts. Finally, the results of the coaching process analysis were presented in the form of a diagram containing descriptions of the relationships between concepts, categories, and core-categories, as well as a story line that included a narrative theme comprised of the three elements.

In addition, an analysis worksheet tracked the coding process and contained four items: concept names, definitions, variants as concrete examples, and theoretical remarks, each conveying a different aspect of the general phase of the coaching process, the participant's coaching behaviors, and the manner in which the behaviors were carried out. The constant abstractness of the coaching behaviors was reflected in their expressive forms: noun phrases, verbal nouns, adverbs, participles, and prepositional phrases.

Following the M-GTA analysis, I used the content of the interviews with Micky to study the "why" and "how" of his coaching behavior. The next section shows the results of the M-GTA analysis, as well as how the coach perceived his own coaching behaviors.

4. RESULTS

The data obtained from the qualitative analysis using the M-GTA are first presented in tabular format; these data represent the what aspect of the coaching behaviors that Coach Micky utilized in his coaching practice. Then, a few specific scenes where his coaching led to an improvement in the players' performances are described in detail with the presentation of the actual players' or coach's actions or behaviors. After highlighting the main findings from the M-GTA analysis, interview data were utilized to explain the reasons for his coaching behaviors. An overall picture of his coaching behaviors is presented in the end.

Note that the coaching behaviors identified in prior research and confirmed in this study are italicized. However, the titles of several of them have been modified to reflect the study's hierarchical coding results.

4.1. Micky's Coaching

Table 1 presents the results of the analysis of Micky's coaching behavior using M-GTA. Three core categories describing distinctive characteristics of Micky's coaching behavior were identified: goal setting, concurrent instruction, and correction demonstration. These core categories were classified further into coaching the group and coaching individuals as representatives. The results indicated that Micky's coaching started with <<goal setting>> and progressed to <<concurrent instruction>> and <<correction demonstration>>. There was no <<wrap-up>> to conclude the session at the end, as the training continued.

Table 1 Coach Micky's coaching behaviors for language enhancement

<<Core category>>	[Category]	{Concepts}	(Sub-concepts)
goal setting (12)	coaching the group (12)	explaining the procedure (12)	using verbal instruction (6)
		using first names (9)	
concurrent instruction (39)	coaching individuals as representatives (18)	providing corrective feedback (14)	explicitly (10)
			implicitly (3)
			in interrogative form (1)
		reacting to players' performances (21)	*reinforcing positively* (11)
		pointing out poor performances (3)	explicitly (1)
			implicitly (1)
		reminding about points (1)	explicitly (1)
		using first name (27)	
correction demonstration (42)	coaching the group (13)	*questioning* (12)	in motion (3)
			only verbally (9)
		clarifying the points (1)	
	coaching individuals as representatives (20)	*questioning* (6)	in demonstration (6)
		reacting to players' performances (11)	showing agreement (8)
			providing corrective viewpoints (1)
			showing disagreement (1)
			showing interest (1)
		clarifying the points (3)	
		using first names (18)	

4.2. Goal Setting

Micky started his coaching with <<goal setting>> and moved on to the phase of explaining the training procedure ({explaining the procedure}). In addition, he explained the training procedure by providing only verbal information ((using verbal instruction)) without adding visual information.

4.3. Concurrent Instruction

After <<goal setting>>, he moved on to the <<concurrent instruction>> phase, where the players actually engaged in the training. Here, the <<concurrent instruction>> appeared alternatively with the subsequent core category <<correction demonstrations>>.

Coach Micky's <<concurrent instruction>> also included the behavior of {providing corrective feedback}, {pointing out poor performances}, and {reminding about points}; the "points" in this last concept were the coaching content covered in the core category <<correction demonstration>>. Micky's coaching attitude toward the players' error correction was that he provided corrective feedback and then encouraged them to continue to do it if they modified their performance appropriately ((reinforcing positively)).

4.4. Correction Demonstration

It could be observed from Coach Micky's coaching that <<correction demonstration>> had a substantial impact on the improvement of players' performance. In addition, Micky always started the coaching of these phases by {questioning} the players in both [coaching to the group] and [coaching individual as representative]. He ultimately provided the players with a clear solution to the questions he posed through verbal information ({clarifying the points}). In particular, in the situations of [coaching individual as representative], several types of interactions occur between the coach and the players before [clarifying points]; that is, the coach asked a question, the players replied, and the coach further replied to the response ([reacting to players' performance]), but there were several ways of responding. First, the coach frequently agreed with the players' opinions (showing agreement). However, if he did not agree with the player's perspective (showing disagreement), he informed them about the perspectives that were more important in terms of improving performance. Even if an athlete responded unexpectedly and in an unsatisfactory way to the coach's inquiry, if the coach was satisfied, he implied that their response was noteworthy (showing his interest). Since it seems worthwhile to make this interaction scene a particular focus of analysis, I will again apply the IRE interaction model and describe their interaction, as follows (excerpts from the transcripts of these interactions can be found in Supplementary Material Fig. 1).

First, Coach Micky signaled the transition to the <<correction demonstration>> during the phase of <<concurrent instruction>> by asking "What's happening?" (Micky 1). This is a scene in which a player failed to pass to a teammate, and the coach inquired about the reason for the error. The coach's query is a type of high-order question, as players must possess "analysis, synthesis and evaluations skills" to generate new knowledge (Metzler 2000, 107). After this, Micky rephrased the question to make the intention of the question clearer: "But what's happening? Why do you lose the ball and begin the game?" (He intended to say, "Why did you lose the ball at the beginning of the training?") (Micky 2). However, this remains a high-order question. Micky resumed the training without receiving a clear answer to this question (Micky 3).

After this, the coach continued training for a while, but the same problems recurred, so he moved on to the <<correction demonstration>> (Micky 4). He again asked the player about the factors that prevented him from passing the ball well (Micky 5). In response to this query, the player responded, "Coz staying in the same spot? So, I could have…" (Jacob 1), which led Micky to inquire further (Micky 6). That is, the coach made progress in eliciting an ideal answer from the player. Then, the player gave a further response to the question asked by Micky (Micky 6), which further generated another inquiry (Micky 7). Up to this point, Micky's questions (Micky 5-7) were all high-order questions (Metzler 2000). However, asking further questions based on the content of the players' responses constituted a coaching process by which the players could arrive at a clear ideal answer that the coach had in mind.

The coach's questions had so far been high-order questions. In line Micky 8, however, he posed a different type of question, saying "So, what's our… what's our objective? What's the purpose?" which is related to the common goal shared by all players participating in the training. Thus, this question can be regarded as a type of lower-order question (Metzler 2000). That is, the coach gave the players high-order questions to help them figure out why they were not playing well during the training, and the lower-order question to narrow down the cause of the problem. He then clarified "the purpose of the

training" and returned to the high-order question (Micky 8). The player here was able to provide a clear answer (Jacob 3) as they had been provided hints through the low-order questions, although the question here was the same as in Micky 6. In addition, Micky's other lower question in Micky 8 ("... if you change the position, what's happening for Harry?") enabled Jacob to respond correctly. Lastly, Micky evaluated Jacob's response and, as a prologue to his own final clarification, posed another low-order question (Micky 9). Fig. 1 shows how Micky used the two types of questioning to help players reach the goal.

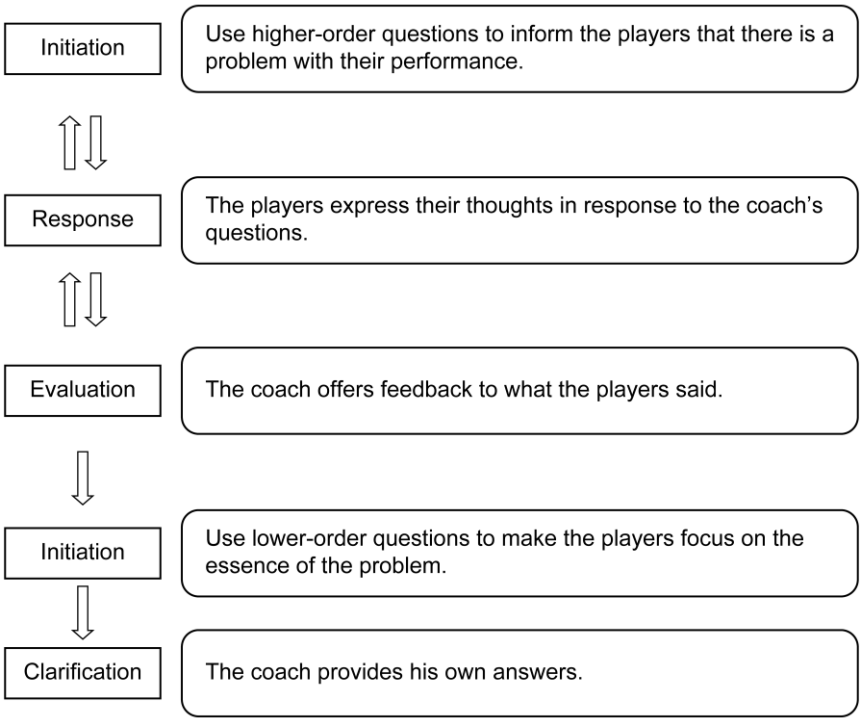

Fig. 1 The IRE-C interaction in Coach Micky's coaching

The fact that the <<correction demonstration>> phase has the largest amount of description among the core categories is consistent with the fact that in the interview, he himself mostly referred to this phase as an occasion to enhance his players' performance. In my interviews with him, I attempted to begin with abstract questions in order to avoid leading him in the direction I wanted him to answer, as follows.

Question:

"Since we were able to collect data throughout training this time, I was wondering if you could give us a general sense of what you look for in order to enhance your players' performance during training, or what your philosophy is."

Answer:

"I always try to give the players chances to learn to develop their abilities on their own. During the training, I would tell them what to do to improve their performance, but whether they follow my instruction or not is totally up to them. This is important. In this regard, I make the most of their thoughts and views and respect them to the greatest degree possible. I give them questions to encourage them to speak out their opinion, and then I try not to steer them too much towards my answer as much as possible."

As mentioned above, Micky placed great importance on the players' own initiative to improve their performance, and he viewed the act of asking them questions as a means to foster that attitude. Next, I asked him to watch his IRE scene in the video and asked him the following:

Question:

"As you saw in the movie, you asked the players a lot of questions. Did you do this intentionally?"

Answer:

"Yes, of course. Giving instruction is crucial in some cases, but I believe it is more important to let the players make their own decisions, whether to use inside or outside kick, or how to position themselves. In such situations where judgement is required, the coach should ask the players questions to get them thinking, but even then, it is not good to provide the players with the coach's own solutions immediately. There are many coaches in Australia who can't bear the slowness or inability to get things out, so they just tell them what to do before the players answer. I think this approach is inappropriate to nurture their thinking ability."

Micky's statements show that his questioning during the Initiation was planned and aimed at preparing the players to make their own decisions regarding their playing options during games and training sessions, rather than following the coach's lead. In addition, he also indicated something important about his conduct in the evaluation of IRE as follows.

Question:

There was a situation where you were giving the players an answer, and one of them argued with you. I was curious what you would do in such a case. What do you do when there is a response that you want, but they have different viewpoints from yours?

Answer:

"I want to respect their viewpoints, regardless of who they are. I accept them because opinions originate from within, and if I don't accept their opinions, it means I don't accept the player or person. If you continue to do this, the players may go mute or cease to generate their own originality. I don't want it to happen, so even if they have a different or incorrect perspective than mine, I accept it at first. It's possible that they'll have a better concept than I will, or that the player will have a better idea than I will."

As demonstrated by this comment, the evaluation of IRE is a critical component of Micky's coaching. That is, Micky felt that accepting players' responses to his queries, regardless of their quality, would lead to improved players' viewpoints, which would in turn result in enhanced performances in the long term. Indeed, throughout the IRE procedure outlined above, Micky always began his feedback with an affirmative statement in the evaluation phase, regardless of how the players responded.

He then explained the process that should be established prior to clarification, the final phase of IRE.

"Even when I have a message I want to deliver, I always make sure to ask the players' opinions first. I express my interest in their comments, regardless of their differing points of view, and accept them. Next, I provide them with an alternative viewpoint and an opportunity to reanalyze the issues from a different angle. Let's say, if a player mentions an area that I want to lead them to, I will make use of it and guide them in that direction. In some cases, they still don't come up with a solution, so I try to guide them by giving them hints, such as keywords or describing the situation in depth."

As shown in this comment, he thought that when something went wrong with players' performances, they should first evaluate why the issue occurred. Regardless of how the players reacted, he would embrace them and gently guide them toward the message he desired to convey. In this regard, his inquiry session was IRE-C (Clarification), rather than merely IRE.

His coaching philosophy played a significant role in why he directed his players so methodically and thoroughly, as follows:

Question:

"Analyzing your coaching has shown me that, as you mentioned, you asked your players a lot of questions throughout training. Is it a key component of your coaching?"

Answer:

"I believe that just teaching football is insufficient as a coach, especially for young players. Most of the players in the youth program do not go on to become professional players. Even if they do, their lives continue afterwards, so I think they need to evaluate many problems they face in life, contribute their own views and facts, and communicate them to others so that they can overcome them. I can't find anyone in Australia who cares about the growth of players, except in developing their football skills. One of my colleagues recently told me that I was the only coach who was willing to help the players in their personal lives and that there was no one who could take my position."

This quote demonstrates that Micky's coaching style of frequently asking his players questions and pursuing a methodical process to get them to arrive at a solution comes from his desire to help them develop not only their football performance, but also their life, which he recognized as a trait that he himself possesses. Micky's colleagues' comments about his unique coaching style suggest that Micky's socially supportive attitude toward his players may have contributed to the team's development, although it is Micky's subjective statement.

4.5. Coaching Process

The categories and core categories containing the concepts obtained by the M-GTA analysis and their correlations are shown in Fig. 2.

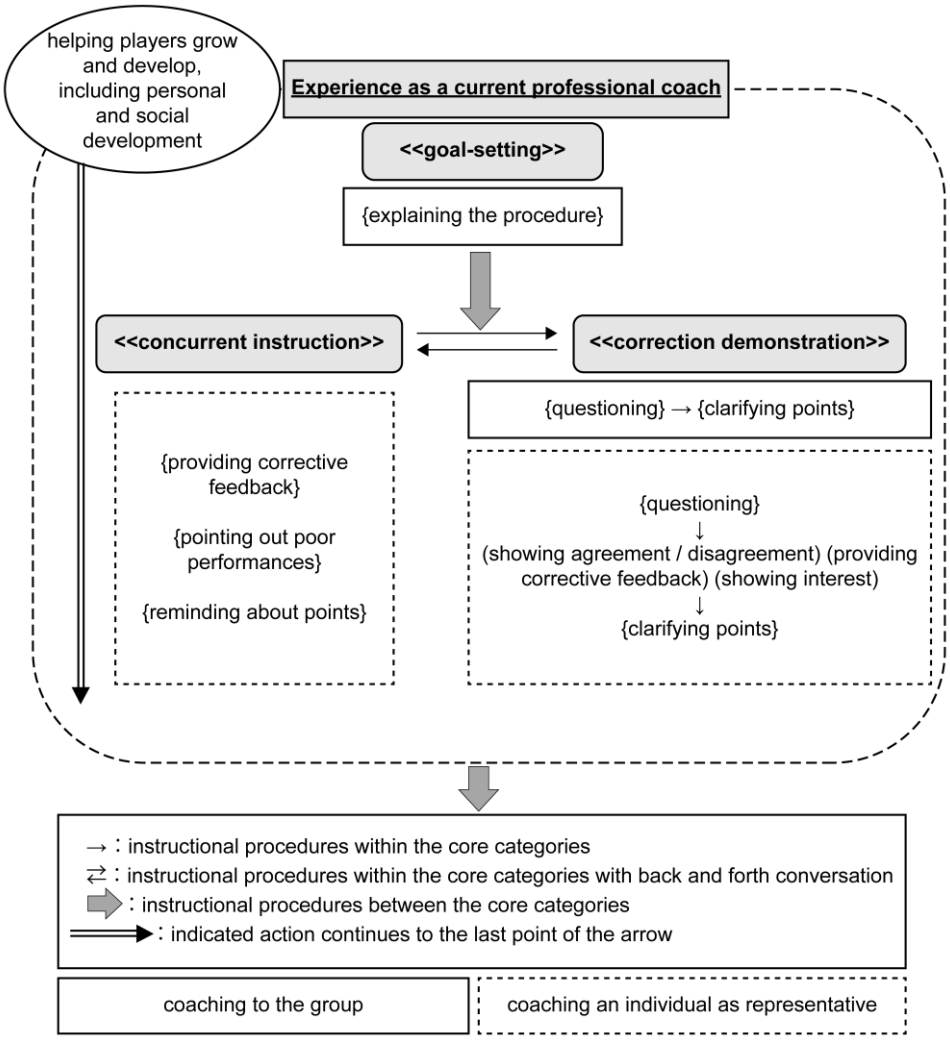

Fig. 2 Coach Micky's coaching process

5. Discussion

This section attempts to characterize Coach Micky's coaching process, discussing how his coaching knowledge or skills can be incorporated into the development of educational materials from the perspective of English for sports.

To begin with, it is possible to extrapolate the characteristics of the football coach's language use during training sessions, which will be foundational resources for developing ESP materials. According to the findings of the M-GTA analysis, Micky's training process was as follows: the coach explained the purpose and procedure of the training to the players (<<goal setting>>), the coach provided feedback to the players while they were performing

the training (<<concurrent instruction>>), and the coach temporarily suspended the training to correct the players' errors (<<correction demonstration>>). By viewing the three phases of the coaching process as a single communication pattern in coaching during training, we can obtain valuable insights for developing language teaching resources. When people communicate in society, they adhere to a certain pattern to accomplish their social objectives, and this pattern is fixed to a degree. This pattern of communication between people-in-interaction is called a genre. Genres are staged, goal-oriented patterns of interpersonal interactions that enable communication using language (Eggins 2004; Halliday 1994). Further, in each genre, there is a generic structure (Butt et al. 2003; Eggins 2004), a series of steps that one takes to achieve a goal. For example, in the case of shopping, there may be a basic structure of beginning, middle, and end; a greeting indicating the start of trading, the main body of trading, and a greeting signaling completion of trading, respectively. By taking these steps, customers and salesclerks can sell and buy goods smoothly. Even when we conduct more complex business transactions, these basic steps still appear: the buyers get what they want, and the seller receives the money, indicating that the goal of the genre "shopping" is accomplished. Based on this concept of genre, the three phases identified in this study can be defined as the generic structure of football coaching, which can be taught explicitly to novice EFL athletes to help them participate successfully in their target community.

Furthermore, as generic structures have different elements of schematic structure, which reveal different linguistic choices (Butt et al. 2003; Eggins 2004; Halliday 1994), linguistic components such as vocabulary and grammar specific to each stage of the generic structure could be identified. During <<goal setting>>, when the coach explains the aim and procedure of training to the players, the coach's role is to provide information, and the linguistic form that typically realizes this task, or what functional linguists call "function," is assertive or declarative (Nishijo 2018; Wegener 2018). A coach's behavior of asking the players questions constitutes the act of demanding information, and the linguistic form that realizes this function is interrogative. If players are involved in a <<concurrent instruction>>, ellipsis might be used to allow the coach to talk in a timely and well-paced manner as the players move. Thus, understanding what coaches do during the training reveals genre-specific linguistic resources, helping establish a path for developing learning materials that focus on these linguistic forms. For instance, this approach can assist in creating teaching materials that focus on grammatical items commonly used in English football coaching situations, such as complex sentences (e.g., After you make a pass, make sure to move into a new space), imperatives (e.g., Go get the ball), and modalities (e.g., You could dribble if you want to). In addition, the structure of a training program, such as goal setting, concurrent instruction, and correction demonstration, can be incorporated into teaching materials for EFL student-athletes who pursue coaching as their future career. Thus, student-athletes who learn authentic football-related English using ESP materials or activities created based on the experiences of professional football coaches would be able to understand how the target language can function as a tool to achieve the social goal of coaching football players and gain insights into good English football coaching.

In addition, to familiarize learners with football coaching-related English expressions, it is important to provide them with rich information of contextual factors surrounding the linguistics elements. As the goal of the learners in this study was to use language to conduct football coaching abroad, it was critical to demonstrate how an experienced professional coach acts when advising players on competent behavior to win games (Garfinkel, 2002).

In this sense, the varied aspects of Micky's coaching skills discovered in this study should be explicitly taught to learners as non-language-acquisition-related skills. For instance, the most critical component of Micky's football coaching was his elaborated and sophisticated interaction with the players via IRE-C interaction, beginning with questions ({questioning}). As shown in section 4.3.4., he used a highly advanced inquiry coaching technique to guide the players to a solution in a logical and thought-provoking manner by following the procedure of "giving high-order questions, accepting their viewpoints, giving high- or low-order questions, accepting their viewpoints, and clarifying" rather than immediately informing the players about the problem in their performance. It can be assumed that Coach Micky must have used questions to initiate dialogue and discussion with their players about their performance to develop his players' problem-solving, decision-making, and creativity abilities, as well as game comprehension (Forrest 2013; McNeill et al. 2008). This may be because learners' ability to discuss components of their performance most likely demonstrates their ability to successfully play the sport (Wright and Forrest 2007).

In addition, Micky's coaching style using questions deserves discussion from an intercultural perspective. Using question-based interaction, Micky urged his players to assess their performance problems, determine the underlying causes, and find solutions during training. Although prior research has pointed out these effects in sports coaching, Micky's queries had a purpose other than merely increasing players' football-related competitiveness. The intention behind this coaching style was the hope that they would deal with the hardships or predicaments they would encounter in their personal lives. As Chelladurai et al. (1988) pointed out, Japanese athletes tend to expect social support from sports coaches, which is consistent with the traditional Japanese emphasis on cohesive and harmonious groups (Chelladurai et al. 1988; Reischauer 1977). Micky's eagerness to be involved not only in the advancement of players' football skills but also in the well-being of their personal lives may be observed in other Japanese coaches as well. As Micky himself stated, there are few Australian coaches who are as attentive to off-pitch issues as he is, and this type of coaching mindset may be advantageous internationally as a distinctive characteristic of Japanese coaches, which was also indicated in the comments made by Micky's colleague above.

In the future, these non-language-acquisition-related factors should be taught to learners along with language teaching content. For instance, providing students an opportunity to analyze linguistic and functional features of football coaching would help them understand how language is used to construct meaning in authentic football coaching situations. Teachers' prompts, such as, "What coaching techniques did the coaches use to help players realize the key points that enhance their performance?" would raise students' awareness of the relationship between language use, context, and purpose in the domain of football coaching.

6. Conclusion

This study examined natural settings of authentic football instruction with the purpose of applying the findings to the creation of ESP materials, an endeavor that has seldom been attempted in the field of ESP. The findings of identified patterned coaching behavior in the authentic football training session, and the coaching philosophy and principles underlying them, could promote the development of English for sports in several ways. First, as this

coaching pattern represents certain aspects of authentic football coaching practice, ESP practitioners could identify the generic structure of football coaching and linguistic features that tend be realized in natural football training settings. This specification of language use in football coaching enables the consideration of the extent to which particular examples of language in the ESP discipline are unique to the field while other forms are generic (Woodrow 2018). Therefore, the linguistic features of football coaching revealed in this study can be used by a course designer as unique syllabus items to the respective target settings. Second, in-depth analyses using triangulated qualitative data sources (such as the M-GTA, scene-specific descriptions, and interpretive interviews) of a particular setting (such as a football coach conducting a training session in English) would allow ESP practitioners to gain knowledge of the target setting. As Woodrow (2018) noted, teachers enjoy high status in English for general purposes (EGP) classrooms, as they are the experts of language teaching, whereas ESP practitioners in ESP classrooms are rarely experts in the disciplinary field. This may influence the relationship with the learners, with ESP practitioners feeling insecure due to a lack of subject knowledge (Wu and Badger 2009). Hence, curriculum designers and ESP practitioners who are not familiar with the target domain should collaborate with subject specialists, such as Coach Micky, who could provide subject-specific linguistic data as well as abundant contextual information. ESP teachers will play an important role in helping student-athletes who are seeking career opportunities abroad to learn not only English, but also different cultural values, which may help them in the job market and tertiary education (Chmelikova and Hurajová 2019). Student-athletes who seek to study or work abroad must cultivate a quality of mind that is essential for understanding the interplay between others, society, and language. Promoting learners' awareness of these social and cultural constructions of football coaching in a foreign language context should be one of the focal points in the future development of teaching materials and resources.

While the pedagogical implications obtained from the qualitative analysis of one football coach presented in this study are insufficient to address all of the requirements for developing ESP teaching materials, the present findings could pave the way for further studies in language education in the context of sports, which have long been overlooked in the domain of ESP.

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SUPPLEMENTARY MATERIAL

Micky 1: Hey what's happening? Initiation

Steve 1: There's one kicker? Response

Micky 2: No yeah two kickers. Evaluation

But what's happening? Why did you lose the ball at the beginning of the game? Initiation ((Went for one ball and gave it to a player and looked at his face))

Steve 2: I'm not too quick Response

Micky 3: "Too quick". Yeah. Steve, over there. Try again. Evaluation

((Micky gestured for Steve to move over))

Players: NA

((Restarted the training))

Micky 4: Bounce back yeah. And stop. It's the same problem. Initiation

Micky 5: So why did you lose the ball? This is… firstly…the ball from me…but why did you lose the ball again? Initiation

((Started looking at Jacob))

Jacob 1: Because staying in the same spot? So, I could have Response

Micky 6: So, why do you still need a change in the positioning? Initiation

Jacob 2: So, it's easier to keep the ball coz you got an option, right? So if he stands here he can cut off… Response

Micky 7: So, what's our objective? What's the purpose? Initiation

Harry 2: Break the line. Response

Micky 8: Break the line. Evaluation

Initiation → Initiation

So, why you need to change the positioning? This is effective for me. Also, what will happen if you change your position? What will happen to Harry?

Jacob 3: Because Harry will be like 'oh you're saying just staying on the same spot'

Response

Micky 9: Yes Evaluation

If you over there, what will happen to Harry? Initiation

Harry 3: Well-

Micky 10: If I pass the ball back, where will Harry move to? Harry has moved over there. So, what about this direction? Yeah, give me the ball. If your position is close to me, where is the Harry's position now? Maybe he will be closing this direction. You will be more likely to lose the ball, right? Clarification

So, every time you change your positioning, you can create more opportunities or options to play, alright?

IRE-C INTERACTION BETWEEN THE COACH AND PLAYERS

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Original scientific paper

EXPLORING THE FLEXIBILITY OF ESP MATERIALS THROUGH THE IPO MODEL: CORPUS AND CONSUMER INSIGHTS FROM THE TURKISH EFL CONTEXT

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Abstract. *Previous research tended to exclusively conduct expert/user evaluation and rely heavily on subjective survey data for simply ascertaining general satisfaction with a fixed predetermined set of coursebook features. However, not only the material's absolute worth separated from the users' personal opinions but also multiple perspectives on its relative worth informed by their lived learning experiences should be concurrently assessed to make better informed decisions about textbook adoption. Thus, this multimethod study sought to provide a holistic, multidimensional and more realistic assessment of coursebook performance through conflating objective information on its compositionality with reflective user knowledge about the actual functioning. We used the inputs-processes-outcomes (IPO) model for the deconstruction of a global coursebook in dental English, based the expert review on corpus findings and complemented it with the less-studied student-users' (87 sophomores from a Turkish-medium dental school of a large urban public university) retrospective evaluation against preferred criteria. The corpus-based IPO analysis of the coursebook (non-)texts and content analysis of their post-use reflections revealed that: i. striking the right balance between text comprehensibility/authenticity and content breadth/depth emerged as a major concern to lower-level learners, ii. disciplinary vocabulary coverage and explicit teaching of high-frequency dental words constituted its greatest strengths, and iii. despite awareness of the need for differentiation in the sequencing, task difficulty and interaction patterns to develop fluency and thrive in the 21st-century workplace, they prioritised meaningful practice over freer use to survive university and approved the cyclical progression from whole-class comprehension-based procedures to text-manipulative production activities. To achieve deeper learning outcomes than functional language mastery, it still needs transformation through: learner-compiled (e-)portfolios of academic and humorous genres, increased visibility for women dentists, creative use of illustrations, conscious attention to grammar and ludic language use, and integration of cross-cultural elements and service-learning projects on linguistic/cultural mediation.*

Key words: *corpus analysis, inputs-processes-outcomes model, retrospective evaluation*

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1. INTRODUCTION

In our shrinking world, where professionals across sectors are urged to think globally and act locally, a good command of English is a prerequisite for transferring expert knowledge and becoming a fully-functioning member of one's borderless community of practice. Over half a century since the launch of the first course in technical English, the practical concept of work/study-motivated language learning has resulted in the emergence of many different kinds of tailored programs, and the teaching of English for Specific Purposes (ESP) has now established itself as one of the most dynamic approaches to EFL instruction. Owing to the US-led economic boom and educational investments in oil-producing countries, the postwar world first witnessed the rise of English as an internationally-accepted language of technology and commerce (Hutchinson & Waters, 2010). With the expansion of global mobility, healthcare providers are now faced with the need for learning occupational English perhaps more than in any other profession (Ferguson, 2013; Kim, 2008).

Due to the impact of Covid-19, English-speaking countries, which have become dependent on migrant health workforce, are speeding up recruitment, and where free movement (i.e. of dentists across the EU) is ensured by mutual recognition of professional qualifications, both probability of working abroad and demand for ESP learning are increasing, especially in undergraduate dental education (Belcher, 2009; Cohen, 2021; Manogue et al., 2010; Moross et al., 2017). However, despite being widely termed "a materials-led field", ESP textbooks are still not profilerating, and compared with their super-domains (e.g. engineering, medicine), even fewer sub-specialist materials exist that target the learner's particular specialism (e.g. marine engineering, dental medicine) because publishers tend to target a general audience to make the most profit possible (Barnard & Zemach, 2007; Bhatia et al., 2011; Dudley-Evans, 2001, p. 135; Maher, 1986; Pasalic & Plancic, 2018). In the case of dental English materials, only one UK-produced series (e.g. Career Paths: Dentistry) (Evans et al., 2016), is found against three locally-produced counterparts from Czech (e.g. Dentistry English for dental practice) (Baumrukova, 2013), Persian (e.g. English for the students of dentistry) (Tahririan et al., 2015) and Polish contexts (e.g. English for dentistry) (Wawer & Stanska-Bugaj, 2007). Therefore, when it comes to the provision of instructional materials tailored to dental students' specific needs, (already overloaded) teachers can also face a moral dilemma over whether to write their own usually without proper training and/or support from stakeholders, or compile a potentially unprofessional-looking course pack from copies of commercially available general English (GE) textbooks and subject-specific articles.

Amid such apparent dearth of ESP materials with narrower focus, evaluation of the few sub-specialist textbooks as in the current case of dentistry gains importance for both materials writers and users, as the former group of professional authors and first-timers writing from scratch can then provide a better scaffold for the latter's teaching-learning process. While they might be known for showing more concern about collegial rather than customer feedback, evaluative review by multiple users; more precisely, by teachers as evaluator- and learners as consumer-readers, is required for all kinds of ESP materials, whether written for one's own specific classroom (teacher-made), or later developed into global[1]/locally-produced textbooks for a broader audience as in the above examples on dental English (Hamp-Lyons, 2001; Stoller et al., 2006; Swales, 1995).

[1]The term refers to the "genre of English language textbook which is produced in English-speaking countries and is designed for use as the core text in language classrooms around the world" (Gray, 2002, pp. 151-152).

There is ample support in the ESP literature for involving, besides their teachers, the learners in the process of investigating the material's compatibility with the instructional context, for evaluation by teachers promotes professional development and authorial empathy by raising awareness about what to do/look for and avoid in one's own/others' materials, whereas evaluation by learners utilises student expertise, reveals user-preferred selection criteria, guides textbook revisions and so boosts language learning (Bocanegra-Valle, 2010; Breen & Candlin, 1987; Hutchinson & Waters, 2010; Kim, 2008; Masuhara et al., 2017; Stoller et al., 2006). Nevertheless, in practice, learners given little/no say in the matter eventually buy their teachers' choice, and especially when teaching ESP for distant specialisms, many select easy-to-teach and unthreatening materials to their self-image and status (Glendinning, 1997).

1.1. Trends and gaps in ESP coursebook research

It appears that it would be difficult, if not impossible, to find the best possible vehicle for our shared learning journey without obtaining multi-user feedback from both teachers and students. Now that the two kinds of evaluation are equally significant to ESP materials selection and production, some form of learner evaluation, despite difficulties in design (multiple-choice/open-ended), timing (mid/end-course) and administration (in L1/L2), should definitely be undertaken after use, even in the presence of careful piloting (Barnard & Zemach, 2007). A closer look at the evaluation studies of the past decade has, however, demonstrated that despite being conducted in research settings as varied as periphery countries and with future professionals from all walks of life, i. local rather than global materials dominated the tertiary ESP classrooms (e.g. Celik, 2018; Hashmi et al., 2019; Kostenko, 2015; Razmjoo & Raissi, 2010; Wang, 2010), ii. inclusive representation of textbook views was only occasionally attempted through surveying relatively small samples of diverse participants (40-250 students, 12-30 ESP teachers, 2-10 faculty) (e.g. Bouzidi, 2009; Razmjoo & Raissi, 2010; Wang, 2010; Yasmin et al., 2016; Zangani, 2009), iii. similar Likert-type questionnaires and self-developed checklists (5-55 items) were used, often without standardisation, even after adaptation from established/already-adapted instruments for GE coursebooks (e.g. Bouzidi, 2009; Celik, 2018; Ebadi & Naderifarjad, 2015; Nikou et al., 2014; Wang, 2010), iv. if semi-structured/focus-group interviews were (co-)administered, cursory summaries of responses were given (e.g. Boshrabadi et al., 2015; Hashmi et al., 2019; Karimnia & Jafari, 2017; Yasmin et al., 2016), v. expert reviews were limited to qualitative document analysis, where the coursebook researchers applied either of two major schemes to identify (dis)advantages (e.g. Darani, 2014; Karimnia & Jafari, 2017; Kostenko, 2015; Vera-Cazorla, 2015), vi. few addressed more discrete issues such as gender positioning through (non-)text elements, cultural orientation and diversity in global business English (BE) series (e.g. Goyal & Rose, 2020; Pashmforoosh & Babaii, 2015), communicativeness of maritime English (ME) coursebooks (e.g. Coslovich, 2021) and evolutionary development of English for medical purposes (EMP) materials in Spain (e.g. Vera-Cazorla, 2015).

It was also worth noting that corpus evidence was seldom employed to corroborate findings from expert and user reviews; for instance, frequency counts of technical words were performed to crosscheck appropriateness of lexical content in Darani's (2014) comparison of local and global ESP materials and Boshrabadi et al.'s (2015) investigation of teacher/student-perceived lexical needs and coursebook realisations, whereas Ou (2019)

alone used corpus tools to determine the extent of subject coverage, variety of discourse markers, amount of vocabulary recycling and text difficulty levels across Chinese-made series. Scantiness of corpus information, coupled with overuse of generic checklists/schemes, may however have led to duplicative results on coursebook efficiency because global materials often achieved user satisfaction in almost all aspects except for provision of L1-support and culturally-responsive teaching (e.g. Bouzidi, 2009; Celik, 2018; Ebadi & Naderifarjad, 2015; Kostenko, 2015; Medrea & Rus, 2012), and, conversely, local materials became the target of criticism due to lack of communicative methodology, text/task authenticity and skills integration (e.g. Darani, 2014; Nikou et al., 2014; Razmjoo & Raissi, 2010; Wang, 2010; Zangani, 2009). ESP coursebook research can therefore be claimed to concentrate on redocumenting what different materials have/lack for the typical profile of crowded, time-compressed and lower-level EFL classrooms with GE-teachers-turned-ESP-practitioners.

1.2. Rationale for the study and the inputs-processes-outcomes framework

It is observed that just as purchase decisions for any product can be determined as much by expert reviews as by consumer reviews, so more informed decisions can be made about textbook adoption in the ever-changing ESP classroom, provided that good teachers primarily as good materials providers consult and involve learners as most immediate users in decisions relating to their learning options, and moreover base their shared decision-making not only on personal preferences but also on sound corpus data. Leading authorities on materials evaluation, Harwood (2005), Rubdy (2007), Tomlinson (2007) and Littlejohn (2011) have likewise underscored both the limitations of judging coursebooks only against ad-hoc lists of directly observable global criteria and the need to provide a systematic in-depth analysis through corpus-driven methods rather than subjective impressions. Considering the increased circulation and complexity of all-encompassing contemporary coursebooks, it has now become more important to reveal their true nature, the interplay between the writer(s)' (non)linguistic and pedagogical choices, through reverse engineering and understand the rationale for being evaluated in specific ways, in order to give consumers more control over materials and model successful coursebook features for future editions (Chan, 2009; Littlejohn, 2011; Stoller et al., 2006; Swales, 1995).

For the above reasons, unlike previous research, which tended to exclusively conduct expert/user evaluation and rely heavily on subjective survey data for simply ascertaining general satisfaction levels with a fixed predetermined set of coursebook features, this study sought to provide a holistic, multidimensional and thus assumedly more realistic assessment of coursebook performance through conflating objective information on its compositionality with reflective user knowledge about the actual functioning in the ESP classroom. Consequently, we used Maley's (2011) inputs-processes-outcomes (IPO) model for the deconstruction of Evans et al.'s (2016) aforementioned global material for teaching dental English, based the expert review on corpus findings and complemented it with the less-studied student-users' retrospective evaluation. The analytical framework was specifically preferred due to its relevance, clarity and functionality. The basic assumption of the IPO model is that since all learners/teachers/teaching situations are "uniquely different", greater flexibility should be allowed "in decisions about content, order, pace and procedures", which in turn encourages creativity in teachers' (methodological) and learners' (linguistic) behaviours (Maley, 2011, pp. 379-380; 2013).

In his chart, Maley (2011, pp. 386-387; 2013, p. 181) organises materials production around three key constructs: i. inputs, raw texts of all imaginable forms (pictorial/auditory/visual/printed), ii. processes, "generalisable pedagogical procedures" to be performed on the inputs, with different modes (individual/group), mediums (spoken/written) and task-orientations (e.g. summarising/problem-solving), and iii. outcomes, the ends to be attained by engaging in the processes, ranging from material (e.g. visual displays) and pedagogical ones (e.g. reading speed) as "the direct product of learning" to educational (e.g. independence) and psycho-social (e.g. self-awareness) types linked to larger aims. In enabling different combinations of texts and procedures to generate desired outcomes, the IPO model empowers the stakeholders to exercise choice over created materials and provides a practical tool for revealing the (in)flexibility of published materials in an increasingly consumer-driven marketplace (Maley, 2011). Lastly, the IPO model, despite instrumentality in materials development and evaluation, is an underused framework, for we know of only McCullagh's (2010) study, where it was used for an initial evaluation of a commercially-produced medical English textbook based on five teachers' own views and their reports of student perceptions from semi-structured telephone interviews.

In summary, this study aimed to discover how and why a given ESP material got to be the way it was, whether it really contained what it should, as well as how the learners interpreted its performance against preferred criteria by collating corpus and consumer insights, and posed the following research questions: i. To what extent can the inputs provide variety in professional text-types, conversational/occupational role assignments, as well as pictorial, cultural and gender representations? ii. To what extent can the processes provide variety in activity types, sequencing and skills-focus? iii. To what extent can the recycled L2 functions, grammatical exponents and lexical items reflect essential work-related needs? iv. To what extent can the outcomes generated by the material's methodological choices demonstrate deeper learning? v. To what extent can the material satisfy the student-users' prioritised requirements for effective textbook experience?

2. METHOD

This study adopted a multimethod design in that two qualitative strands (text/corpus and reflective analyses) were utilised simultaneously and during data analysis, qualitative and quantitative approaches were combined through data transformation to allow comparisons between data sets and gain deeper insight into the problem situation (Creswell, 2009; Morse, 2003). It was considered that merging two qualitative analyses on the textbook corpus and students' post-use reflections and quantifying qualitative data with frequency distributions could prove more sensitive than a single method in revealing the material's absolute worth separated from the users' personal opinions as well as multiple perspectives on its relative worth informed by their lived learning experiences, and thus offer a fuller picture of the researched phenomenon, i.e. flexibility of ESP materials (Mik-Meyer, 2020).

2.1. Data collection

Eighty-seven sophomores (39% male; 61% female, aged 19-21) were purposively selected among dental students (DS) of a large urban public university in Turkey. Having received no English preparatory education and being first-time takers of a two-credit ESP (elective) course at a Turkish-medium program, these multilevel adult learners constituted

information-rich cases capable of unravelling student-perceived benefits and limitations of *Career Paths: Dentistry* (CPD) (A1-B1) by *Express Publishing* (Evans et al., 2016), probably the only available global coursebook in dental English (Evans et al., 2016). Because thoughtful language data are easily procured from documents without resort to transcription, the students' post-use reflections, along with their ESP textbook provided the qualitative data (Creswell, 2009). All the verbal (written/aural) and non-verbal (visual) texts were included in the textual analysis of 45-unit/118-page material. Three glossaries also formed the corpus for comparative lexical analysis. At the end of two 16-week semesters, McGrath's (2002) pyramid activity was administered, whereby textbook views and prioritised evaluative criteria were elicited from their reflective writing in response to the prompt: "List up to three things you liked and disliked about your coursebook. What changes would you make to CPD?". In efforts to improve consent, encourage candid responses and increase data quality, the research purpose was explained to the participants and confidentiality was ensured by identifying their data with case numbers (e.g. S18) (Ciambrone, 2004; Creswell, 2009).

2.2. Data analysis

The qualitative data were examined with content analysis, for it enables not only the summary and reporting of main messages but also generation of "replicable and valid inferences from texts" (Cohen et al., 2007; Krippendorff, 2004, p. 18). In the first strand, the textbook content was explored with Maley's (2011) IPO model: i. 45 written texts were categorised into four text-types, ii. 45 aural texts were analysed with respect to conversational pairings and gendered role assignments, iii. 114 questions from 26 dentist-patient conversations were classified as information/confirmation-seeking (ISQs/CSQs) and subclassified according to degree of coerciveness Hale's (2004) varied forms exposed, iv. 202 visuals were separated into Hill's (2013) illustration styles and design purposes, and along with 40 culture-loaded texts, were evaluated according to Cortazzi and Jin's (1999) patterns of cultural representation. During the analysis of processes, the same 15 activity types were identified within 45 units and their frequencies were distributed according to instructional focus, mode and phase (Nunan, 2004). To specify what grammar, functions and vocabulary were activated, 45 role-playing activities were analysed in terms of macrofunctions, microfunctions and grammatical exponents (Nunan, 2004). A wordlist of 920 headwords (e.g. fill: filling>fillings) was derived from 1287 tokens in CPD's glossaries and compared with three reference wordlists, Carlson's (1999) first 50 word families, Crosthwaite and Cheung's (2019) top 50 keywords in the dentistry corpus, and Wang et al.'s (2008) top 30 word families in the medical academic word list (MAWL), using AntConc 3.5.8 (Anthony, 2019). Comparison against high-frequency wordlists was tabulated because it renders the best items for L2 learning across lists (Dang & Webb, 2016). While Carlson's (1999) full list was unavailable, the overall comparison was performed between the latter two. In both comparative modes, headwords became the unit of coding, which "minimises the difference between the numbers of items in each list" and is "the most valid approach" (Dang & Webb, 2016, p. 139). Crosthwaite and Cheung's (2019) top 50 keywords were reorganised into 36 headwords and full list of 873 keywords (proper names excluded) into 555 headwords. The intended learning outcomes produced by combination of inputs and processes were only qualitatively evaluated with regard to

Maley's (2011) material/pedagogical/educational/psycho-social outcomes, as their interaction, being complex and wide-ranging, cannot be reduced to a formula.

In the second strand, the students' post-use reflections were the content analysed by two coders independently. After rigorous reading of data, they determined salient patterns, compared preliminary findings and reached consensus on the final coding scheme of 24 categories beneath two overarching themes: 11 concerning textbook benefits (visual impact, learning of subject-matter, field-specific lexicon-building, ample reinforcement, communicative role rehearsal, scaffolded learning through text simplification, pronunciation modelling, self-study support, suitability for level, brevity of units, convenience) and 13 textbook limitations (lack of: balance between content depth and breadth, accuracy-based supplementaries, variety in activity order and difficulty, improvisational language use, reasonable price, generic diversity, extra visuals, interactive learning resources, grammar reference; unfulfilled proficiency expectations, cluttered layout, glossy paper, monoculturalism). To enhance accessibility and usability of qualitative findings, they were formulated as thematic statements, declarative summary sentences (Sandelowski & Leeman, 2012). To enhance reliability and validity: i. detailed description of the context was given, ii. theoretical frameworks were employed for data coding, interpretation, organisation and connection to existing research, iii. all parts of data were exhaustively inspected and analysed, iv. respondents were invited to confirm initial findings, v. frequencies and percentages of occurrence were appropriately tabulated alongside examples, vi. cross-categorical comparisons were made, and vii. as they used L1 for better self-expression, translations of direct quotes were abundantly provided (Collins & Stockton, 2018; Creswell, 2009; Silverman & Marvasti, 2008). The overall percentage agreement was calculated as 89% for the textbook data. The intercoder reliability for retrospective reflections (88%) also fell within Miles and Huberman's (1994) acceptable range.

3. RESULTS

3.1. Results from the IPO analysis

All three books (B1-B2-B3) relied on career-specific readings and listenings compatible with Turkish DS' first-year curriculum. Table 1 displayed the classification of written texts according to discursive functions. The vast majority was evenly balanced between instructive and informative types (76%). As the level increased, there was a shift from descriptive-instructive to instructive-informative paradigm.

Table 1 Distribution of written texts according to discursive functions

Types	Examples	B1		B2		B3		Total	
		f	%	f	%	f	%	f	%
Descriptive	Poster on tooth anatomy	6	13.33	2	4.44	0	0.00	8	18
Instructive	Brochure on oral hygiene	7	15.55	3	6.66	7	15.55	17	38
Informative	Article on medication	0	0.00	10	22.22	7	15.55	17	38
Persuasive	Ads on dental practices	2	4.44	0	0.00	1	2.22	3	6
Total		15	33.33	15	33.33	15	33.33	45	100

A thematic comparison also indicated: i. B1's descriptive and instructive texts outlined core concepts (e.g. dental specialties) and professional tasks (e.g. developing chairside manner), ii. B2's informative concentration extended L2 knowledge of common dental problems, and iii. B3's instructive and informative composition introduced other clinical procedures (e.g. taking health histories) and more specific subject areas (e.g. geriatric dentistry). Although the back cover blurb promised a rich variety of realistic passages, they did not closely reflect typical generic conventions of the material's self-professed genres in Table 1. Different varieties were only distinguishable by superficial features (e.g. chapter number/page orientation). Despite real-world settings, most with a dialogic style had fictive authors, condensed information into simple summaries and seemed fabricated as pedagogical texts for introducing language.

Table 2 Distribution of aural texts according to conversational pairings

Types	B1		B2		B3		Total	
	f	%	f	%	f	%	f	%
Dentist-dentist	5	11.11	1	2.22	4	8.88	10	22
Dentist-patient	5	11.11	13	28.88	8	17.77	26	58
Dentist-other	2	4.44	1	2.22	1	2.22	4	9
Patient-other	3	6.66	0	0.00	2	4.44	5	11
Total	15	33.33	15	33.33	15	33.33	45	100

When CPD's aural texts were categorised according to conversational pairings as above, more than half occurred between dentist and patient (58%) and ten involved two dental professionals (dentist-dentist/dental hygienist) (22%). Expert and novice (dental resident-intern) interactions went unexemplified. Triadic (dental resident-intern-patient) dialogues were nonexistent. Despite inclusiveness of their communicative circle, the conversations may not fully represent the institutional talk in everyday dental practice. Mixed-gender interactions might be assumed to induce gender equity in the discursive realm. Nevertheless, a closer analysis of conversational content demonstrated not only did men overall acquire the more occupational role of dentist oftener (f_{md}=30; f_{fd}=20), but they also outnumbered women dentists in dentist-patient conversations (f_{md}=18; f_{fd}=8). Female interlocutors were patientised twice as much (f_{mp}=11; f_{fp}=20) and subordinated as dental assistant/front office personnel to male dentists. In the case of male unavailability, referrals were made to female dentists as second-best alternatives. Female patients were portrayed as talkative, opinionated mother figures or appearance-obsessed, even irrational creatures, discussing treatment options because of unfounded concerns. In a total of 22 instances, where dentists were pictured beside patients, more men than women dentists appeared (f_{md}=13; f_{fd}=9). 12 out of 13 male dentists were illustrated as people in action, plying their trade, whereas five out of nine female dentists were simply shown interacting.

Table 3 Distribution of dentist-patient questions according to degree of coerciveness

Types	Examples	Dentist		Patient		Total	
		f	%	f	%	f	%
ISQs		9	7.89	36	31.57	45	39.00
Wh-interrogatives	How do you typically treat autistic patients?	5	4.38	35	30.70	40	35.08
Modal interrogatives	Can you look at these pictures and tell me which foods you eat regularly?	4	3.50	1	0.87	5	4.38
CSQs		33	28.94	36	31.57	69	61.00
Polar interrogatives	Do you offer services in pediatric dentistry?	18	15.78	21	18.42	39	34.21
Choice interrogatives	Have you had any headaches or any pain in your ears or jaw?	3	2.63	0	0.00	3	2.63
Declaratives	But that will go away, won't it?	12	10.52	15	13.15	27	23.68
Total		42	36.84	72	63.15	114	100.00

CPD's 26 dentist-patient dialogues were subjected to further conversation analysis (CA) to determine whether patients were given equal rights to initiate conversational moves. As is often the case with real patients, conversational openings were done by dentists, except on three occasions. Table 3 showed patients asked over half of questions (63.15%) and both conversational partners mostly elicited agreement (61%) mainly through yes-no questions (34.21%). Instead of dentists (7.89%), patients elicited more information, using almost always open-ended questions (31.57%). Dentists preferred politer, indirect forms of information-seeking (3.50%) and less limiting alternative questions (2.63%) for confirmation-seeking from clients, while patients produced the most coercive declaratives more frequently (13.15%).

Table 4 Distribution of visuals according to design purpose

Types	B1		B2		B3		Total	
	f	%	f	%	f	%	f	%
Photo	45	22.27	47	23.26	57	28.21	149	74.00
Functional	42	20.79	46	22.77	56	27.72	144	71.28
Decorative	3	1.48	1	0.49	1	0.49	5	2.47
Drawing	22	10.89	28	13.86	3	1.48	53	26.00
Functional	8	3.96	12	5.94	3	1.48	23	11.38
Decorative	14	6.93	16	7.92	0	0.00	30	14.85
Total	67	33.16	75	37.12	60	29.70	202	100.00

CPD's visual analysis provided that the majority of pictures were purely functional (83%), and photos, as the primary constituent (74%), became more commonly used for showing the meaning of graphically-enhanced target words (71.28%). Test paper illustrations and notepad holders, with no educational use other than stimulating interest in the end-of-unit activity (form-filling/summary writing), were decoratively embedded, and capitalised on the students' test-taking motivation. Like 40 culture-loaded verbal texts (50 culture-neutral), where all characters, settings and interactions featured Anglo-American people (e.g. Sarasota resident patient, Benjamin Dodson's health history),

geography (e.g. Belleville, NJ dental clinic for sale) and institutions (e.g. Harvard School of Dental Medicine), CPD's visual texts lacked cultural diversity. None but three product images (Euros, French milk bottle, German-made medicine) reflected international target cultures, where English is used as an international language by non-native speakers living in (non-)/English-speaking countries (Cortazzi & Jin, 1999). But for five black figures, CPD formed an all-white community and captured diversity neither in faces nor through discourse, let alone offer locally-relevant content. The material, notwithstanding a one-off opportunity to compare licensure processes, neglected to represent students' source culture and "culture(s) of their future interlocutors" (Matsuda, 2012, p. 177).

As can be observed from the procedural taxonomy in Table 5, CPD's activities followed a set pattern of continuity and mainly served to process contextualised language (78.57%). A typical unit structure started on open-ended questions for activating prior knowledge and led student groups into dictionary search for bold-faced/colour-coded/italicised words. They answered open-ended, true/false and multiple-choice questions (MCQs) to demonstrate reading comprehension and a range of closed tasks (2-option MCQs, matching, gap-filling, word substitution, lexical sets) to reinforce vocabulary, as well as imitating their pronunciation in the taped reading. Classwork on the listening text involved even more of the same comprehension-based activities and dialogue completion. In the productive phase, they memorised the model dialogue and moved on to make their own (7.14%). They eventually converted familiar spoken content into written texts, through form-filling (e.g. completing reports with the patient's information), or more divergent summary writing (e.g. formulating messages for the patient's physician) (14.28%).

Table 5 Distribution of activity types according to procedural settings

Focus (Mode*)	Instructional phase						Total	
	Processing		Productive		Interactive			
	f	%	f	%	f	%	f	%
Pre-communicative	495	78.57	45	7.14			540	86
Open-ended Qs	180	28.57					180	28.57
Dictionary use (GW)	45	7.14					45	7.14
True/false	45	7.14					45	7.14
MCQs (4-option)	45	7.14					45	7.14
MCQs (2-option)	30	4.76					30	4.76
Matching	27	4.28					27	4.28
Gap-filling	21	3.33					21	3.33
Word substitution	9	1.42					9	1.42
Lexical sets	3	0.47					3	0.47
Choral repetition	45	7.14					45	7.14
Dialogue completion	45	7.14					45	7.14
Dialogue memorisation (PW)			45	7.14			45	7.14
Communicative					90	14.28	90	14
Role-playing (PW)					45	7.14	45	7.14
Form-filling					29	4.60	29	4.60
Summary writing					16	2.53	16	2.53
Total	495	78.57	45	7.14	90	14.28	630	100,00

*Whole-group (WG) unless otherwise indicated. GW: groupwork; PW: pairwork.

The course depended on pre-communicative activities (86%), where they practised the specific language forms and functions needed for later communication (Littlewood, 2002). In line with its higher concern for skill-getting, CPD favoured the commonest learning mode, whole-class teaching, where all worked on the same task under the teacher's direct control (Harmer, 2007). This preference for lockstep activities seemed well-suited to large short-term multilevel classes in the Turkish setting. Controlled output practice with cued dialogues and text transformation ensured manipulation of recently-taught items and prepared them for spontaneous use in less intimidating environments (14%) (Littlewood, 2002). According to Table 5, receptive skills practice engaged about four times as much instructional time as productive skills practice, and despite the focus on vocabulary (28.57%), grammar was overlooked in the task chaining.

Table 6 CPD's coverage of disciplinary vocabulary

Overlap between	Common headwords	CPD's wordlist	
		f	%
Carlson (1999)	dental, tooth, treat, oral, health, patient, mouth, use, cancer, care, tmj, disease, gum, help, cause, prevent, therapy, periodontal, problem, infect, joint, inform, include, special, need, hygiene, diabetes, sugar, child, radiation, decay, medical, brush, food, effect, develop, time, dry, remove, pain, fluoride, symptom, surgical, plaque, important, tissue	46	92
Wang et al. (2008)	cell, data, clinic, analyse, factor, tissue, dose, previous, demonstrate, normal, process, similar, concentrate, function, therapy, indicate, area, obtain, research, vary, activate, require, cancer	23	77
Crosthwaite & Cheung (2019)	dental, tooth, caries, periodontal, enamel, oral, restore, implant, material, surface, ceramic, crown, molar, bond, wear, maxillary, occlusal, mandibular, composite, strength, orthodontic, fracture, wire, incisal, bone, specimens, width, rinse, force	29	81

Comparative lexical analysis revealed in Table 6 that CPD's wordlist covered 92% of Carlson's (1999) first 50 headwords, 81% of Crosthwaite and Cheung's (2019) top 36 headwords, and 77% of Wang et al.'s (2008) top 30 headwords. The overall comparison with the latter two lists showed 257 (46%) headwords in CPD's wordlist overlapped with 555 headwords in Crosthwaite and Cheung's (2019) reorganised subject-specific wordlist, whereas the resemblance decreased to 224 headwords (36%) with Wang et al.'s (2008) 623 headwords in the MAWL. CPD can therefore be claimed to provide the most essential dental vocabulary.

In addition to the vocabulary repertoire, a detailed specification of L2 functions and grammatical exponents served to discover which task(s) dentists usually did with language and what structures were recycled in communicative situations. In accordance with work-related needs, CPD foregrounded transactional tasks (78%), where DS mainly practised eliciting/providing information on patient backgrounds/complaints and modalising utterances about dental procedures. Interpersonal tasks (22%) incorporated more social exchanges with a focus on cliental opinion-seeking/sharing. There were no aesthetic tasks in the form of inspirational stories/dentist jokes/memes. However handy they might come in for improved patient satisfaction, CPD was not designed for

entertaining/teaching to entertain. As shown in Table 7, the grammatical content consolidated fundamental knowledge of direct Wh-questions, indirect questions, relatively simple sentences using common verb tenses and more complex ones with primary modal meanings, infinitives and that-clauses. Except the passive, CPD contained most of grammatical criterial features for A2-B1 levels and treated them as formulaic sequences (Cambridge University Press, 2011).

Table 7 Distribution of role-playing activities according to functional/grammatical focus

Macrofunctions Microfunctions	Grammatical exponents	Total	
		f	%
Transactional		35	78.00
Enquiring about events/services	Have you (ever) had…? Can you tell…?	8	17.77
Clarifying information	Oh (do) you mean…? You said that…, right?	7	15.55
Expressing necessity	All dentists are required to It's necessary that…	9	20
Expressing possibility	First/Then, we may/might…	5	11.11
Expressing plans/intentions	I'll/We're going to…	3	6.66
Describing features/functions	It's located/supplied with… Their function is to…	3	6.66
Interpersonal		10	22.00
Asking for/expressing opinions	Do you think we should…? I totally agree.	4	8.88
Reassuring	There's nothing to fear.	2	4.44
Greeting	Good morning, I'm Dr…	1	2.22
Giving/receiving compliments	You look nice… Thanks for the compliment.	1	2.22
Making/responding to suggestions	Maybe we could/should… Sure, that'd be great.	1	2.22
Expressing preference	I'd prefer/rather (not)…	1	2.22
Aesthetic		0	0.00
Total		45	100

The final evaluation in terms of the learning outcomes revealed that the material outcomes from using CPD consisted of uniformly-generated student texts. The pedagogical outcomes also remained unvarying, for the lesson objectives were specified in the teacher's guide as functional language and core vocabulary to be assimilated within each unit. The students were stripped of opportunities to reflect on the quality of the learning content and experiences, and neither were they instructed how to track their progress and extend learning beyond the classroom. There was little attention to building life skills for peer/self-assessment, except when partners compared answers to vocabulary and writing activities before whole-class feedback. Instead of teaching how to think critically, work collaboratively and solve real-world problems, it aimed to equip users with dental core content and functional language toolkit. Incidental encounters with vulnerable groups in texts did not guarantee to raise social/intercultural awareness.

Consequently, CPD was far from achieving even broader educational goals such as positive personality development in the psycho-social sphere.

3.2. Results from textbook users' retrospective evaluation

The content analysis of post-use reflections demonstrated that the student-users referred more to the many benefits of their ESP textbook (52%). They also proved quite voluble in criticising CPD in almost every respect except the vocabulary component. According to Table 8, visuals became the most popular textbook feature, for they linked increased comprehension and retention to the added interest from "high-quality photo prints" (S75) (f=66). For the same reason, they became the target of those demanding more contextualisation in vocabulary learning (f=24) (S46: "When more pictures support explanations, they become more interesting and stay in our minds").

Table 8 Results from textbook users' retrospective evaluation

User Responses	f	%
Benefits	313	52
Appealing visuals facilitated comprehension and retention.	66	10.87
It promoted content-learning.	53	8.73
It developed discipline-specific lexical repertoire.	50	8.23
Activities provided ample reinforcement for appropriate language use.	40	6.58
Dialogues instantiated future communicative roles in work settings.	38	6.26
Simplified texts ensured content delivery and student engagement.	31	5.10
Listenings and taped readings provided accurate pronunciation models.	12	1.97
App provided a facility for self-study.	8	1.31
It was at the right level for the learners.	8	1.31
It was organised into compact readable units.	4	0.65
It was easy to carry.	3	0.49
Limitations	294	48.00
It favoured breadth over depth in content knowledge.	54	8.89
It lacked basic resources for extra practice and self-assessment.	47	7.74
Activities needed to vary in sequence and difficulty for greater learning.	36	5.93
Activities needed to enable improvisational language use in small groups.	31	5.10
It can be made more affordable.	31	5.10
It needed to be supplemented with academic and humorous texts.	24	3.95
More pictures were needed for cueing word meanings.	24	3.95
It lacked appropriate digital resources for interactive learning.	12	1.97
It lacked grammar reference.	9	1.48
It fell short of their proficiency expectations.	8	1.31
Cluttered pages interfered with their learning.	6	0.98
Glossy paper proved tough to write on.	6	0.98
It used target-language culture elements exclusively.	6	0.98
Total	607	100.00

*Respondents gave multiple answers.

The second most-cited benefit concerned integration of language and dental content (f=53). Topic familiarity assisted them in "fixing knowledge" (S39) and building readiness (S4: "It told many topics in small bits… supplied us with initial knowledge

about our field"). An almost equal number also advocated that the material needed to strike a balance between coverage and depth (f=54). The topics, though "well-chosen", were "too many" and treated so "superficially" (S8) that when conflicts emerged between "what teachers taught in other courses" and the information being presented, they searched the web for details (S35). Even if more comprehensive information meant increased vocabulary load, they preferred it to "less professional" content (S49). They recognised the importance of content-specific words to exchange content knowledge (S6: "They will help us collect useful information from foreign sources and explain treatments to foreign patients in big cities"). As a result, CPD was generally found good at expanding dental lexicon (f=50).

As to CPD's learning activities, they seemed divided over efficiency. 40 out of 87 users reported having enough opportunities for consolidating newly-learned language across the four skills, while another 36 required major procedural change in the sequencing and difficulty. For proponents like S14, "many different activities, tests, fill-in-the-gaps, matching, completing dialogues let [them] practise in many ways, reading, listening, speaking…", which in return "increased [their] language capacity". However, opponents like S32 ("We were doing the same activities one after another... Maybe effective, but I got bored and tired") were upset about the doggedly predictable lesson sequence. S36 remarked: "The activities were good for memorising, but I want to use my mind. When I am challenged, I don't forget easily". They wished to engage in more open tasks and requested extension with cognitively demanding alternatives (S18: "…classical [essay-type] questions"), where they "[themselves] make inferences from the text" (S31), or "write freely about [their] ideas, not just what [they] listened" (S24).

From the learner's perspective, another advantage was that the aural texts exemplified conversational moves and functional language use in professional communication (f=38). These dialogues (S28: "a fiction of real life") gave glimpses of "everyday conversations, question-answer patterns, conversation flow" (S11) and "how [they] should react to patient complaints" (S16). When it came to their use for speaking practice, 31 expressed discontent over lack of small-group activities for extemporising. They were aware that cued dialogues essentially served vocabulary learning, and unless they learned to use the language actively through more communicative activities, namely songs (S19: …[to] teach our child patients"), games, puzzles, group discussions, interviews (S35: "…with our teachers and get interesting answers from real mouths") and case discussions, they could not solve their notorious problem of "understand[ing] the language but not speak[ing] it" (S48).

CPD's text collection was liked for comprehensibility (f=31) and disliked for variety (f=24). The former group argued text simplification aided their understanding of an otherwise overwhelming material and maintained student interest. For the latter group, CPD needed enriching with academic and humorous texts: articles (S20: "…[for] those considering academic career"), case reports (S42: "I want to be an orthodontist. I must see how successful orthodontists treat different cases"), conference presentations, success stories (S1: "Dentists narrate memories and give advice to dentistry students"), cartoons (S55: "Our teachers tell us about their funny patient dialogues. Caricatures about dentist phobia can make it more enjoyable") and practical tips (S44: "…did you know? corners give interesting facts about dentistry market"). If it is to escape inconsistency, CPD should also attach equal importance to phonological and grammatical accuracy. The textbook that used taped readings and repetition drills to teach the accurate pronunciation of words (f=12) neglected grammar for nine respondents, while "small reminders of grammar" could have supported comprehension and production (S29).

With respect to supplementary resources, they were more negatively oriented. Only eight referred to the app, *digibooks*, as a useful tool for self-study, whereas more than seven times as many students reported lack of access to traditional paper-based (f=47) and interactive resources (f=12). Practice tests (f=26), mini dictionary (S40: "…of common words in the book") (f=18) and bilingual wordlists (S34: "…Turkish equivalents for instant learning of meanings") (f=11) were eagerly sought-after to self-monitor progress, increase test performance (S5: "Our educational system is based on tests, so we need more tests, quizzes after every unit") and build a better lexicon (S64: "Glossary gives just meanings. We want synonyms, example sentences"). As digibooks could not go beyond a digitised book (S60: "Pdf texts, key, CDs in app form don't make it interactive"), they desired multimedia-enhanced materials (videotaped dialogues, documentaries, interactive games, online quizzes), alongside online learning platforms (S36: "…we can watch videos, compete and chat with our friends and teacher") for interactive and individualised practice.

According to Table 8, those that considered the language content suitable for their level were equal in number to the ones yearning for a higher-level material (f=8). Unlike S51, who found it "neither too challenging nor insufficient", S2 noted, what is "sufficient for school life" can be "weak for professional life, if you want to work abroad". Despite teaching "challenging words" (S25), CPD was "simple on the sentence level" and rendered itself unhelpful for "publish[ing] English articles" (S58). Few participants mentioned the clear and concise manner in which each two-page unit presented the content (f=4) (S37: "It tells the topic briefly…has an easy design to study…never turns you off"). Three participants expressed their liking for its portability. However, even more students disapproved of cluttered pages (S27: "…too bright, crowded, weary pages. I'd leave empty spaces for taking notes") (f=6), and thin glossy paper (S7: "…good for a magazine but not suitable for an activity book. I couldn't write with a pencil or erase my pen writing") (f=6). Their objection to glossy paper was reiterated when more than one-third complained about the cost (S57: "If they used normal paper, they could sell it at a cheaper price") (f=31).

Finally, a small minority observed CPD's exclusive use of target-language culture elements (f=6) (S21: "It generally talked about dentistry abroad. It'd be better for our learning if they told us about dental applications in our country too"). They were seeking more relevance (S4: "They limited dentistry to private sector, but working in state hospitals is commoner in Turkey"), but those more open to learning about other cultures expected cross-cultural comparisons between the home and target country (S10: "Which courses does a dentistry student take in the USA? …Does he, like me, carve teeth from soaps in his first year?") and across international contexts (S23: "The book didn't compare dentistry education in different countries, how long it takes, how they train in practical classes. Interviews with foreign students can make it more attractive).

4. Discussion

4.1. Importance of providing comprehensible content-related multimodal inputs that model multiple genres, symmetrical dialogue, gender- and culturally-responsive communication

When the results from the IPO analysis of the coursebook material were evaluated in conjunction with the student-users' retrospective review of its performance in their primary focus areas, the way the right balance could be established between text

comprehensibility and authenticity, as well as between content breadth and depth, turned out to be a bigger bone of contention for the given Turkish ESP context. It was understood that if torn between the two determinants of textual quality, the majority seemed to value their understanding above the real-worldness of the coursebook texts, and accordingly appreciated CPD's choice of contrived, colourfully-illustrated, mainly instructive-informative type of content-specific texts for contextualising language. Being new-made sophomores and less proficient users of English, they were apparently enabled, through the use of pedagogical texts, to encounter new information in less challenging, inherently interesting environments and exploit their existing content-knowledge to counterbalance lack of language knowledge (Graves, 2000; Nunan, 2004).

A collection of such short, simplified texts, with familiar disciplinary content and visual supports, was also reported to provide a stepping stone to authentic technical texts (those not specially designed to contain previously-learnt language and equally problematic for teachers and learners), and when argumentative genres (text-types except descriptions, instructions and narratives), embodying abstract relationships, were omitted as well, they could further reduce processing difficulties (Coxhead et al., 2020; Hyland, 2006; Nunan, 2013; Tomlinson, 2001). Hutchinson and Waters (2010) also adapted their ME materials on the grounds that the teachers lacked the realia and lower-intermediate students much of the general technical language to interpret the specific language in their mostly descriptive texts. As a result, CPD clearly abandoned the "long-standing practice" of materials development from texts written "by specialists for specialists" to save the learner/teacher frustrations with the linguistic/specialist knowledge beyond their ken (Basturkmen, 2010; Jordan, 1997, p. 113; Mountford, 1988, p. 79).

Although a wide-angled approach to content selection was supported in undergraduate (i.e. freshman and sophomore) courses, and use of content-area materials from lower grade (e.g. elementary/secondary school) textbooks was even sanctioned, an almost equal number of the participants, who overlooked the resulting increase in grammatical complexity, lexical density and sentence length, incongruously demanded more elaborated and varied texts (Belcher, 2009; Bhatia et al., 2011; Bocanegra-Valle, 2010). This might be either because they had mistaken ESP teaching for content-teaching in English, or their ESP material, being aimed at lower English levels, had become too dependent on "conceptually oversimplified" texts (Dudley-Evans, 1998; Glendinning, 1997, p. 133). As also evidenced by their reflective writing, a more meaningful textbook experience could yet be engendered learnerwise, if the generic diversity included academic and humorous texts on a cline of authenticity from real-world to created (Brown & Menasche, 2005). It may still remain unknown how to make the perfect blend of genuinely authentic and non-authentic materials, but as early as the 1980s, a similar set of written resources to theirs, ranging from journal articles and research reports to slide presentations and comic books, was previously proposed for inclusion to prepare medical learners for potential difficulties in understanding/responding to professional matters and entertaining/being entertained (Allwright & Allwright, 1977; Morris & Stewart-Dore, 1984; Nunan, 2004). Clapham (2001) similarly highlighted the difficulty of selecting appropriate readings because of the wide variability of texts in specificity and of students in background knowledge and advocated use of academic texts including different rhetorical functions.

Another lesson from the joint evaluations of the coursebook composition and student-users' post-use reflections was that but for the corpus evidence on the exercise of power in dentist-patient dialogues and women's participation in the textbook-induced professional

image-building, valuable insights into CPD's (non-)linguistic inputs might have otherwise gone unnoticed by the participants, very few of whom were merely cognizant of the imbalance in the cultural content. More precisely, greater dependence on dentist-patient conversations could have been considered a desirable feature of this ESP material on the basis of the students' positive reception alone; nevertheless, the CA findings revealed that even if their simulated scenarios felt authentic to the audience, the majority of these conversations were actually transmitting unrealistic and gendered portrayals of dentist-patient relationships through primarily patient-initiated information-seeking and less coercive, male-dominated dentist roles.

While no normative constraints existed against clients' undertaking of such moves in service settings, doctors in previous studies of institutional talk exercised authority over patients by initiating conversations, adjusting openings to consultation purposes, asking more questions, asking more for factual information and restricting choice of answers (Frankel, 1984; Ferguson, 2013; Gafaranga & Britten, 2007; Hutchby & Wooffitt, 2008). One main reason for the unexpected power asymmetry in favour of patients could be that by enabling them to initate questions, seek information and control responses more, CPD attempted to level the discursive status of interlocutors in dentist-patient interactions and accustom novices to the idea of patients taking a more proactive role in their oral health. In the same way, Maher (1986, p. 121) drew attention to scarcity of dyadic and triadic consultations in many of CPD's predecessors and raised questions about the ESP teacher's responsibility for reinforcing inequalities or introducing such "progressive modes" of conversational behaviour.

The representation of male and female dentists also failed to reflect the reality of their occupational community. Despite increased visibility of women in dental education and leadership (constituting 49% of dental graduates, 18% of dental school deans and 28% of dental society presidents in the USA), dentistry was here conceived as a male-dominated profession (Solana, 2019). Besides assigning more powerful/professional positions to men and foregrounding their authoritative voices and on-task images in workplace situations, negative stereotyping of women, through associations with domesticity and fragility, was another common practice in downplaying female contributions to the textbook-envisioned society. Through male overpopulation, speech initiation, expert-positioning and clichéd images, gender imbalances prevailed over editions and across content-areas, and ELT materials, whether originating in developing/developed countries, imposed "a skewed view of the world" (Adel & Enayat, 2016; Barton & Sakwa, 2012; Gray, 2016, p. 103; Goyal & Rose, 2020; Lee, 2014). As female invisibility in textbooks might deter girls from entering valued professions, or adversely affect medical students' future practice, CPD's dialogues and illustrations needed adapting in such a way as to convey more egalitarian and realistic role models for Turkish DS (Brugeilles & Cromer, 2009; Parker et al., 2017).

Given that the demand for more text-accompanying pictures could be taken as a compliment, visuality was another merit of the material they almost unanimously acknowledged. In addition to verifying the learners' accounts of the functionality of its pictorial input, the visual analysis proved yet again that their use was conventionally restricted to conveying meaning. As in Hill's (2013) analysis of three other global EFL coursebooks (Inside Out, face2face, Outcomes), CPD made greater use of colourful photos than drawings due to their readier availability from picture agencies, especially with digital publishing, whereas, unlike them, it mostly made functional rather than decorative use of illustrations. This finding stood in direct contrast to Romney and Bell's

(2012) study of 15 BE textbooks, too. Furthermore, the learners could have benefited more from the higher ratio of functional to decorative images, if the coursebook images served not mainly to teach vocabulary through direct association but also to stimulate creative language use (Hill, 2013). The majority of visual elements in ELT textbooks similarly fulfilled an explicative function, simply "that of a flashcard", but their pedagogical utility should be improved through higher-level text processing (Basal et al., 2016; Carney & Levin, 2002; Duchastel & Waller, 1979; Romney, 2012; Seburn, 2017, p. 85). All in all, the current material can be considered to have achieved greater authenticity in its non-verbal rather than verbal texts. While even the presumably less naive teacher might be lured into buying by strategic positioning of such attractive illustrations, a few of these Turkish DS still preferred decluttered and cost-effective materials to existing glossy presentation (Bell & Gower, 2011; Tomlinson & Masuhara, 2018).

Despite making up only a small fraction of user feedback, cultural appropriacy emerged as a major issue in the textual analysis. The heavy concentration of target-language culture elements meant that due to a mistaken premise about textbook sales, their global ESP material, though intending quite the reverse, preferred to safely represent a more similar yet smaller circle of L2 users functioning exclusively in native contexts. As in McCullagh's (2010) evaluation of another global EMP series, CPD targeted overseas-qualified dentists willing to work in English-speaking countries, and therefore, neither the learners' culture nor those of diverse patient groups in the home country got taught in the ESP classroom. Since Turkey has been catering to medical tourists from most of Europe, the Middle East and North America, and some four million refugees from at least five different countries, CPD was found negligent in not providing exposure to cross-cultural communication (M2PressWIRE, 2013; Sengul & Cora, 2020; UNHCR, 2019). Two decades after Tomlinson's (2001, p. 70) urge to present "English as a world language" to advance education/careers, and/or communicate with fellow non-natives, most ELT materials dominantly focused on the teaching of the target culture (Baleghizadeh & Shayesteh, 2020; Forman, 2014; Huang, 2019; Pashmforoosh & Babaii, 2015; Rai & Deng, 2016). As in CPD's case, they reduced diversity by non-verbally excluding certain groups and verbally constraining lower-level students' professional encounters to native/native conversations (Canale, 2016; Hu & McKay 2014; Huang, 2019; Pashmforoosh & Babaii, 2015; Syrbe & Rose, 2018). Possibly due to copying the basic design from best-selling ELT products, CPD was also marred by the homogenisation of culture and recommended to spice up content with elements of local and international cultures, so that as mentioned by the discerning few, culturally-relevant materials could make their learning more engaging (Forman, 2014; Rai & Deng, 2016; Shin et al., 2011; Toledo-Sandoval, 2020).

4.2. Importance of harmonising diverse learning foci, modes and procedures for mastering the really useful lexicogrammar at work and achieving beyond functional language practice

Upon comparison of the results from the textbook and user analyses, it became further evident that Turkish DS as experienced learners could grasp what was really done with the inputs, or more precisely, CPD's real purpose of engaging them more in whole-class comprehension-based procedures and text-manipulative production activities, and though appearing to prioritise meaningful practice over freer use to survive university, they were almost equally aware of the need for varying the activity order, difficulty and interaction

patterns to develop fluency and thrive in the future workplace. Despite currently being met with mixed student reactions, the imbalance in favour of accuracy work was also not native to the given ESP material because it was recently documented that communicative activities indeed occupied less instructional time in L2 materials (Andon & Wingate, 2013; Chan, 2013; Coslovich, 2021; Gomez-Rodriguez, 2010; Huang, 2019; Lim, 2019). As a result, the ideal composition for developing fluency may not have been achieved here either; however, CPD's systematic combination of predominantly pre-communicative and loosely-controlled communicative activities was still found appropriate in that compared to open tasks, the relatively closed tasks stimulated more modified interaction and assisted lower-intermediate to intermediate learners to "get production going" (Murphy, 1993, p. 142; Nation, 1997; Nunan, 2013).

Emphasis on dentist-patient interaction and disciplinary vocabulary instruction also followed recent trends in upper-level EMP textbooks and received praise from the users, but CPD differed from other global ESP series by banishing grammar and focusing on receptive skills rather than listening and speaking (Celik, 2018; Ferguson, 2013; Fraidan, 2012; McCullagh, 2010; Vera-Cazorla, 2015). As recommended for lower-levels in existing literature, CPD made appropriate use of reading and listening texts to input to activities and model performance, and yet omission of language focus from its three-phase lesson format deprived them of the language awareness necessary to perform communicative tasks and overcome problems in content-learning (Chan, 2009; Evans & Green, 2007; Hutchinson & Waters, 2010; St. John, 1996). The reason for this may be that the target audience, at various proficiency and experience levels, was assumed to have previously studied English as the lingua franca in medical education (Ferguson, 2013; St. John, 1996).

Complementary evidence from the procedural taxonomy and opposing user responses to the unit structure suggested that since it takes time, effort and money to write varied and creative activities for presenting and practising language engagingly, CPD chose to employ the same type and number of activities in look-alike units, and thus self-inflicted the same inflexibility, for which many ESP materials have frequently been stigmatised as "assembly-line" productions (Ferguson, 2013; Gomez-Rodriguez, 2010; Hutchinson & Waters, 2010, p. 107; Mountford, 1988; Pilbeam, 1987). For this reason, like others in the past, wanting a change from their fixed, reading- and word-focused ESP course, the present participants too required more involvement in small-group fun oral-fluency activities rather than "reproductive language work" (Celik, 2018; Nunan, 2004, p. 32; Ou, 2019; Razmjoo & Raissi, 2010; Wang, 2010). In addition to more room for creativity in their communicative outputs, Turkish DS, being no different from other lower-level EFL learners, using global English materials, demanded bilingual support, grammar reference and extra language practice for three main reasons: i. L1 equivalents facilitated vocabulary-building and enabled cross-lingual/cultural comparisons, ii. grammatical explanations were missing due to the material's functional methodology, and iii. academic performance had primacy over language development due to their exam-oriented learning culture (Celik, 2018; Esteban, 2002; Huang, 2019; McCullagh, 2010; Medrea & Rus, 2012; Yakhontova, 2001). Though to a lesser extent than accuracy-based supplementaries, interactive learning resources, especially videotaped role-plays/consultations, were also desired by Turkish DS, whereas both published and in-house materials had already benefited from video recordings, in order for their upper-level users, to observe real-life doctors' language use and monitor personal

performance in different scenarios (Basturkmen, 2010; Ferguson, 2013; Maher, 1986; McCullagh, 2010; Shi et al., 2001).

Ultimately, the demystification of the recycled lexicogrammatical items led to a better understanding of the pedagogical intents the learning activities were primarily controlled by. It can be understood from the substantial lexical overlap with the three reference wordlists that contrary to "the pick-it-up-as-you-go-along" view commonly held in the teaching of medical vocabulary, CPD promoted careful selection and direct instruction of high-frequency dental words in a similar vein with the locally-produced materials, for which it was highly acclaimed by Turkish DS (Carlson, 1999; Crosthwaite & Cheung, 2019; Ferguson, 2013; Maher, 1986, p. 132; Wang et al., 2008). Despite negligible user disagreement over the level, its grammatical spectrum appropriately included grammatical features indicative of A2-B1 levels, and if instead of chunking, CPD raised awareness of passives/conditionals/relative clauses, it could have captured distinguishing characteristics of dentistry research writing (Cambridge University Press, 2011; Crosthwaite & Cheung, 2019). The classification of role-playing activities by the focal language function also revealed that despite advice to the contrary, CPD got them to use lexicogrammatical resources predominantly for fulfilling transactional rather than interpersonal tasks, and unlike some of its peers, incorporating use of humor and emotional responses to texts, CPD featured no aesthetic tasks due to attention to occupational needs (Casta & Hufana, 2016; McCullagh, 2010; Murphy, 1993; Pashmforoosh & Babaii, 2015). In her analysis of eight BE textbooks, Chan (2009) likewise determined that while institutional talk entailed both transactional and phatic interaction, the ESP materials presented language only for the former and lacked support for development of interpersonal strategies integral to meetings.

Hence, CPD's activities were more intent on imparting fundamental L2 knowledge and skills for dentist-patient communication in an easy-to-learn manner and could go little beyond mere language practice (Nunan, 2013). However, attainment of this traditional outcome set may not suffice to succeed in the brave new workplace. 21st-century professionals are expected to master certain key learning (e.g. critical thinking, problem-solving, teamwork), digital literacy and life skills (e.g. self-direction, cross-cultural understanding, responsibility) alongside core subjects (Trilling & Fadel, 2009). As Moross et al. (2017) pointed out, development of higher-order thinking skills, team-building and communicative competencies has become a must for dentist candidates to provide patient-centered community care and evidence-based treatment, wherever they aspire to work. This ESP material can thus be made to serve "wider educational objectives", namely, to foster learner autonomy, cultural awareness and character development, if supplemented with: gaming, tracking, sharing and chat app features, role-playing rating scales, exit surveys/checklists/can-do statements and service-learning projects, where global/local partners collaborate face-to-face/online and seek solutions to real-world problems (e.g. reducing communication barriers to dental care for refugee children/non-Turkish-speaking patients) (Nunan, 2004, p. 134; Trilling & Fadel, 2009).

5. Conclusion

For the purposes of ensuring consistency between knowledge sources and improving teachers' decision-making during materials selection and/or design, subjective information from the student-users' actual coursebook experiences and objective information from the

corpus-based analysis of its verbal and visual contents were concurrently evaluated in the current study. On the basis of the evidence from the corpus-based IPO analysis and student-users' retrospective evaluation, Turkish DS, with a mildly positive orientation towards their global ESP textbook, can be claimed to be more concerned respectively with: the scope of content-knowledge, visuality and text quality presented by the inputs; amount and nature of language practice, opportunities for oral fluency development and independent learning, and also acquisition of discipline-specific vocabulary triggered by the processes, apart from such miscellaneous features as reasonable cost, whereas CPD can be concluded to be efficient for: making core disciplinary content accessible by pedagogically-prepared non-argumentative texts, introducing an egalitarian style of communication through created dentist-patient dialogues, ensuring ample practice in a non-threatening atmosphere with the right blend of pre-communicative and loosely-controlled communicative activities, developing formulaic sequences essentially for workplace transactions, building a carefully-selected repertoire of high-frequency dental words, teaching vocabulary directly with true-to-life photos and providing standalone units of adequate material for two-hour classes.

It is a given, especially in the ESP context, that what matters more than the texts or tasks selected by the materials producer is both kinds of consumers' interpretation of them, for unless found relevant to their profile, not even the best coursebook is likely to stimulate the pedagogically-intended response from the learners, or give the teacher the necessary drive to create meaningful learning experiences (Tomlinson, 2017; Trabelsi, 2016). For a more learning-friendly version, this material can thus be transformed in the following ways: i. textual variety can be increased with learner-compiled (e-)portfolios of academic and humorous genres, ii. women dentists' visibility can be enhanced with expert-positioning, iii. pictorial material can be manipulated into eliciting creative rather than merely explicative language use, iv. cultural relevance can be improved through integration of cross-cultural elements, v. time spent on receptive and productive skills can be equalled, vi. grammar can be paid the same conscious attention given to vocabulary and diversified to also serve ludic purposes for smooth communication, vii. cyclical progression from mostly whole-class discrete-point comprehension to text-manipulative production activities can be enlivened with creative and collaborative ones, viii. available supplement can be augmented with accuracy-based and interactive resources for reviewing grammar, bilingual wordlists and communicative performance, ix. service-learning projects on linguistic/cultural mediation with immigrant/international patients can be incorporated to achieve such deeper learning outcomes as 21st-century skills, and x. cost-effective alternatives (e-books) can be offered to the glossy print coursebook.

While responsiveness to learner needs was once deemed as its greatest asset and transferability of solutions as the greatest drawback of ESP teaching, CPD's example here illustrates how different users can converge on variety as making/breaking any ESP textbook and whether similar materials can be made more teacher/learner-authentic, using the simple strategy of blending design options (in content, language, skills, procedures) for self-customisation (Hamp-Lyons, 2001). As understood in the Turkish ESP context, the much-needed flexibility to deal with context-specific constraints and possibly wider market appeal comes not from homogenising materials, but from combining different teaching/learning schemes. The choice of a one-size-fits-all or all-in-one approach to materials writing is also a matter of preference, but our findings confirmed previous observations that even if it involves doing the opposite, ESP coursebook writers should

provide consumers with a continuum of choices at any organisational level, from syllabus design to text and task methodology, so that the resulting blend can be eclectic enough to satisfy large and diverse user groups (Barnard & Zemach, 2007; Glendinning, 1997; Graves, 2000; Maley, 2013; Swales, 1980). In our gradually glocalised classrooms, where it has become ever harder to choose the right coursebook among the "near-clones", the ability to bend it to consumer needs is also what distinguishes the really good-provider teacher from a mediocre one (Maley, 2011, p. 392). For this reason, although this study primarily focused on revealing the internal character of one global ESP material up to threshold-level and retrospectively evaluating its performance against corpus-informed data and less-studied student-users' prioritised criteria, future research might consider: i. exploring the evolution of consumer behaviour over time (pre/in/post-use) and across coursebook (local/global/glocal/wide-angled/narrow-angled) species, ii. simultaneously addressing learner/teacher/sponsor/publisher/author-perceptions, and lastly but most importantly, iii. evaluating effectiveness of both ESP materials and (subject-specialist/non-specialist) teacher(s)' actual use (adaptive practices) not just in terms of self-reports, but in terms of student achievement and classroom discourse.

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Original scientific paper

TELECOLLABORATIVE DEBATES IN ESP: LEARNER PERCEPTIONS AND PEDAGOGICAL IMPLICATIONS

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Abstract. *This article reports on an empirical study analyzing the development and use of effective multimodal communication strategies to deliver a telecollaborative debate as the core activity for upper-intermediate learners of English for Specific Purposes (ESP) from two far afield Spanish universities, one located in Gran Canaria and the other in Valencia. The pedagogical project not only focused on preparing and conducting an online debate through telecollaboration, but also on developing communicative skills based on discussion, argumentation, justification, critical thinking and explanation using academic and scientific language. Through a pre-task and a post-task survey, the results highlight, on the one hand, that telecollaboration is an experiential approach for ESP learners that necessarily has to involve pragmatics within a well-organized debate scenario and, on the other, that this two-way collaborative task demonstrates that telecollaborative debates are an innovative and engaging means of exploring not just content but communication and performance strategies while simultaneously helping to increase multimodal communicative fluency in the foreign language. The findings also underline the fact that elements such as motivation and self-confidence are variables that influence the learners' performance in both conducting the necessary research to adequately debate the given topic and seeking efficient multimodal communication strategies.*

Key words: *English for Specific Purposes, telecollaboration, debating, communication strategies*

1. INTRODUCTION

Today's education pursues experiential situations to achieve learning gains rather than grades (Butler, Church & Spencer, 2019; Campbell & Cabrera, 2014). Learning English for Specific Purposes (ESP) implies not only constant acquisition of knowledge related to a particular profession, but also the development of communicative skills and several transversal abilities that university students must endeavor to comprehend to become international citizens. It is precisely this increasingly globalized world that we live in today that has largely influenced the growing demand for students to be able to speak accurately and communicate skillfully in English in international, academic, and professional settings (Arnó-Macià et al., 2020).

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A telecollaboration project that pursues the exchange of work and ideas among distant participants who communicate online with a variety of virtual tools to solve a problem or to create a product can provide an appropriate setting to develop these skills (Belz, 2002; Dooly, 2017; Helm & Guth, 2016; O'Dowd & Eberbach, 2004, O'Dowd, 2015, 2018). Furthermore, research into telecollaboration exchanges whereby participants use a foreign language common to all of them, a "lingua franca", rather than communicating with native speakers, has been reported to cause less anxiety when learners interact with non-native speakers, and that the use of a contact language can cement participants' feelings of proximity and mutual support (Guarda, 2013).

To this end, a solid pedagogical design addressing enquiry-based learning, collaboration and multimodal communication must be considered to build arguments. An ESP telecollaborative debate is a real-life task that can denote the full commitment of the participants and the will to cooperate with fellow team members in order to build on and share useful information for the preparation phases of the debate, while being open to new information intake and becoming, to a certain extent, aware of their lacks. A variety of individual and team tasks that can be performed either in or out of class is the basis to engage the learners in doing so. A telecollaborative debate requires appropriate technology and multimodal-multimedia communication, set in a ubiquitous learning environment. This individual and collaborative commitment relies heavily on adequate motivations and self-confidence when communicating messages in English.

This paper is thus grounded on the premise that an ESP-based telecollaborative debate can help university students gain content knowledge while providing a meaningful language learning environment. To this end, the study focuses on the benefits of conducting a threefold classroom experience; that is, a) drawing on debating as a technique to improve both linguistic and life skills such as critical thinking, teamwork, etc.; b) collaborating through virtual exchange with fellow university students while sharing ideas, knowledge and experiences, and c) expanding knowledge in a given field of ESP.

The ESP telecollaborative debate described here is a class-assignment that combines knowledge input and output, with an argumentative discussion conducted in the foreign language. The task requires two opposing teams of debaters who must prepare arguments in favour or against the resolution under scrutiny, in compliance with a set of rules that are controlled by a moderator and witnessed by an engaged and participatory audience. In order to succeed, all parties are actively involved through multimodal online communication to build their arguments and defend their positions within the debate. This study thus sets out to respond to the following research questions which touch upon the three elements mentioned above (ESP, debate, and telecollaboration):

RQ. 1. Did learners perceive the telecollaborative debate as being beneficial in terms of language intake and communicative development?

RQ. 2. How did learners perceive that the telecollaborative debate had helped them improve their life skills?

2. Literature Review

The Pedagogical Gains of Telecollaborative Debates for Language Learners

In this study, the definition of debate is determined by the exchange of argumentative information and multimodal, verbal and nonverbal communication shared between two opposing teams of learners, who are guided by another student moderator, and the

contributions of the learners representing the audience. In terms of a student-centered task, a debate implies dialogical argumentation of exchanged information, provided by a variety of assertions, examples and evidence. In order to succeed, participants must demonstrate having acquired the appropriate skills to find information that can verify, reinforce or disapprove a statement, which, in telecollaboration, must be supported by a collaborative ubiquitous learning environment (CULE) enabling debaters to interact inside and outside the classroom during the preparation phases of the task (García-Sánchez, 2014; O'Dowd, 2018). The debate also promotes the development of argumentative literacy, which Gudkova (2021) has indicated is a key soft skill that ESP university students must present and defend properly and logically when communicating in English. This is in line with enquiry-based learning where the learners/enquirers identify and research issues to develop knowledge or solutions (Escalante Arauz, 2013).

In line with previous research (Belz, 2002; Dooly, 2017; Helm & Guth, 2016; O'Dowd & Eberbach, 2004), the telecollaborative debate implies several pedagogical gains. It pursues the exchange of information and ideas among distant language learners who communicate online with a variety of multimodal virtual tools to solve a problem or to create a product. Moreover, not only digital literacy is needed but an upper-intermediate language level is advised to perform the telecollaborative debate. If the discourse is produced in a foreign language, the intonation patterns, the vocal variation and even the body language would be modified to match that of foreign language. In Fortanet-Gómez and Ruiz-Madrid's (2016) words: "Spoken discourse is multimodal in nature, since it involves the use of different semiotic modes such as words, gestures, intonation" (2016: 58).

Authors such as Anker-Hansen & Andrée (2015) and Cai (2017), who have analyzed debating for scientific purposes in EFL/ESP education, have also pointed out its benefits in developing transversal skills in addition to purely improving communicative competence. Likewise, research has demonstrated that debate can be depicted as an authentic pedagogical task for dealing with a real-world situation that requires learners logically using the foreign language for practical communicative purposes, such as agreeing, disagreeing, explaining or discussing, among others (Cinganotto, 2019). As Lee et al. argued (2013), when learners are adequately supported to 'do' specific things with language, both knowledge building and language learning are promoted. Furthermore, if the telecollaborative debate is set in an ESP scenario in higher education, university learners are encouraged to build their knowledge, discuss their views and develop successful communication skills applied to topics oriented to their future professional careers (García-Sánchez, 2020).

Argumentation Theory and Communicative Performance for ESP

Argumentation Theory (AT) focuses on formal and informal discourse, and how statements and arguments are delivered in oral and written forms. Adding argumentative tasks into ESP courses allows learners to present and build arguments successfully with supported evidence, and to identify flaws so that counterarguments can be formulated and enrich the discussion (Gudkova, 2021). Kaewpet's review (2018) of the criteria and scale of argumentation reported that English standardized tests (TOEFL, IELTS, TOEIC) include reasoning, language use, organization and the authorial voice, which Kaewpet linked to the speakers' authority and self-confidence in his proposed argumentation quality rubric. How EFL learners perform, face, adapt and communicate their messages in English during the debate necessarily establishes connections with pragmatics, which considers argumentation in conjunction with multimodal and multimedia communication (González-Lloret, 2013) that learners can confidently adopt.

Both terms, multimodal and multimedia, are necessary part of the communicative performance of a telecollaborative debate since debaters reinforce verbal content with body language and other multimedia resources (visuals, graphics, videos, external resources or links) as required in a telecollaborative scenario. Multimodal refers to the different manners or forms that contribute to a clearer message, to how our body language or our video presentation contributes to delivering the message successfully. A multimodal analysis will be weighty in a communicative approach since it considers words together with body language affordances produced by the foreign language speaker (Peng et al., 2017). Telecollaborative debates therefore require participants not only to be able to produce but also to interpret complex multimodal and multimedia communication that can prove challenging for them (Fuchs, 2016; Helm, 2015; O'Dowd & Eberbach, 2004), whilst they enrich their interactions with gestures or turn-taking, for instance.

Researchers such as Cinganotto (2019), Ellis (1984), and Xu (2018) have also claimed that assessing communicative performance in English is paramount in a debate task because it entails dealing with content and the strategies used when delivering successful messages. Furthermore, in an ESP debate, language is used to express propositions to model arguments. The reinforcing or attacking argument, delivered coherently and in a timely fashion, implies performing the appropriate role with accurate language, and correct verbal and non-verbal communication strategies, two concepts that are in turn directly linked to public speaking in English as a foreign language (Polacsek & Cholvy, 2011; Van Eemeren & Henkemans, 2016). This study, supported by AT and a multimodal-multimedia communicative approach to learning English, pursues to analyze the strategies needed by foreign language learners to convey effective and evidence-based oral arguments in a debate conducted telecollaboratively.

3. Pedagogical Design: the ESP Telecollaborative Debate

To design this project, a number of pedagogical considerations were identified prior to the carrying out the debate task. The mentor-teachers from both Spanish universities discussed the content and language skills to be included, the digital communication tools to be used, as well as the aims and capabilities pursued in the telecollaborative debate. The syllabi of both ESP courses were analyzed to identify common goals and abilities in English language. The following common abilities were depicted: (1) the ability to communicate knowledge, reasoning and conveying conclusions clearly and unambiguously; (2) effective written and oral communication; and (3) the ability to communicate accurately in a specific discipline in English. Common content and activities designed to foster communication skills and the preparation for the telecollaborative debate were selected. Some examples include a) extensive reading to reflect on the life-long benefits of debating; b) developing oral presentation skills and techniques for public speaking; c) argumentation: strong vs weak reasons (individually/in teams); d) improvisation and speaking of topic X in 1 minute; e) communication strategies, cultural differences and language barriers, and f) common pronunciation hurdles for Spaniards.

The researchers (who were also the instructors) integrated the debate project as a graded task-based activity within each of the target ESP courses. The Universitat Politècnica de València (UPV) awarded 60% of the final grade to the project and the Universidad de Las Palmas de Gran Canaria (ULPGC), 30%. After a brainstorming session, both cohorts proposed several topics relating to their field of specialization and selected one for the debate

through an online poll. The topic was relevant to both industrial sectors, i.e., Telecommunications Engineering and Aerospace Engineering. Consequently, the learners were required to use technical vocabulary in their oral contributions. Additionally, to prepare their argumentations, either in favor or against, the students conducted research –using authoritative websites– to defend their position, thus acquiring new knowledge and supporting their background knowledge with convincing evidence-based arguments.

At the outset of the project, sessions were delivered in each university to a) help them understand the scope and purpose of the telecollaborative task; b) train them in developing debating skills, and c) establish the teams so they could start working individually, in local teams and together with their telecollaboration partners. The students from both universities were divided equally into mixed groups to comprise the team in favor (10 members) and the team against (10 members). The audience was made up of students from UPV only (4 members), and the moderator was a student from ULPGC who had prior debating experience in English. Some strategic steps were vital to fulfil this telecollaborative task, as indicated below.

Initial introductions and interaction

To help learners become acquainted and open to working with fellow students from another university, two synchronous 20-minute online sessions were carried out between each instructor and the other's students. The learners were also requested to create their digital profile on *Google+* and include personal information about themselves, as well as a 2-minute introductory video so everyone could be identified (Figure 1). Several studies support the idea that collaboration is established more easily in virtual environments when friendly, relaxed and supportive relationships are adopted (Vinagre & Corral, 2017), conditions that also have a favorable influence on the communicative dynamics generated (Bañados, 2006; García-Sánchez, 2016).

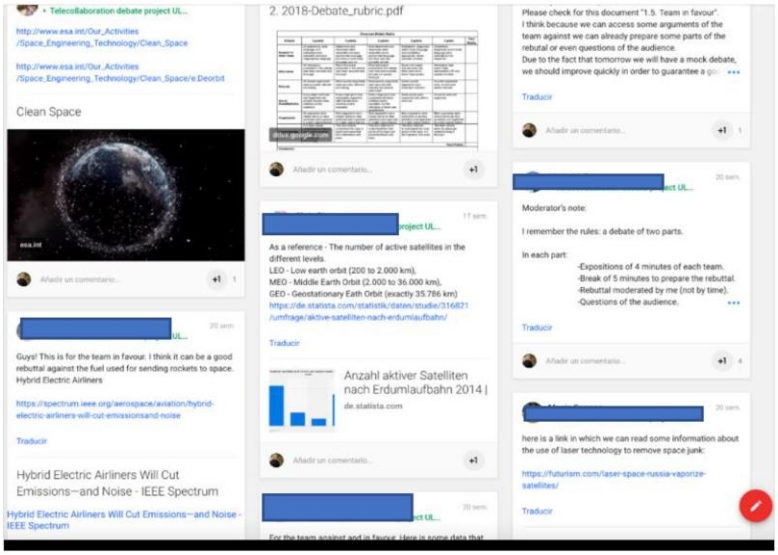

Fig. 1 *Google+* Community for the telecollaborative preparation of the debate

Individual/Team research, and ESP vocabulary

Students conducted research, based on enquiry-based learning, on the topic of debate both individually and in teams according to their role (moderator, team in favor, team against, audience). In addition, learners were requested to collaboratively create a glossary –common to both cohorts– and compile a list of words in English linked to the topic of debate. Each entry had to include term, definition, example in context written by the student, a link to an image (where possible), and the phonetic transcription or a link to a site with a sound file of that word. Students also received a 1-hour training session on becoming more skilled in looking up words in context and learning to select appropriate online dictionaries.

Individual writing and oral practice for intervention

Each learner was responsible for researching the topic under discussion and for developing their own arguments (independent learning) before joining forces with the other team members to organize all the information (collaborative learning). The moderator contributed toward this organization by allocating the time slots to the different turns in the debate.

This step implied individual justification and argumentation in written form according to their role in the debate but the students were also advised to practice these aloud, record themselves and listen back. This exercise encouraged debaters to practice their speaking performance to overcome unnecessary mishaps during the live debate.

Telecollaborative team interactions using adequate platforms

The selection of appropriate tools was paramount to the success of the project. Platforms were sought that would allow synchronous (*WhatsApp, Skype, Google Hangouts*) and asynchronous (*Google+, Google Forms*) communication between the teams, that would favour written collaboration, and encourage instant messaging to support quick decision-making. Prior drills were conducted between both institutions before the debate was scheduled to take place to avoid communication breakdowns during the live event.

Table 1 Tools used in the telecollaborative debate

Preparation Phases	Delivery Phase	Concluding Phase
Google+ platform *Google Docs*	*Skype* *Google Hangouts*	*Google Forms* (Post-Survey)
Google Forms (Pre-Survey)	*WhatsApp*	
WhatsApp		

Team planning, scriptwriting, and corrections

Scriptwriting was one of the crucial and most critical stages of the project. After investigating the issue at hand, students were instructed to write their argumentations to support and defend their position providing strong evidence, according to role (in favor, against or audience member). A model script was distributed to help them understand the structure of the debate (see Figure 2).

Topic: *How will technologies change society: Is space garbage justified for connecting the world/for communications?*				
Introduction of the debate + rules (Moderator)				
Actions	(+) Team (persons)	(-) Team (persons)	Audience (persons)	Time (minutes/person)
Introduction (Moderator)				
Arguments	2 pers.	2 pers.	0 pers.	4 mins./team
Break to prepare rebuttal	-	-	-	5 mins.
Rebuttal	3 pers.	3 pers.	0 pers.	No limit
Questions	All	All	3 pers.	2 mins./pers.
End of the debate (Moderator)				
Total: 10 in favour, 10 against, 5 audience				

Fig. 2 Structure of the debate

The moderator, whose role was to act as a neutral participant –keeping time limits and preventing participants from straying off the topic–, was the only person to have access to all 3 scripts (that of the positive team, the negative team, and the audience). Turn-taking was thus strictly controlled by the moderator and all the interventions, timed. This exercise also meant that participants had to be as clear and succinct as possible in conveying their position.

Live Telecollaborative Debate

Given the time difference between the Canary Islands and the Peninsula, the live telecollaborative debate was scheduled at a convenient time for all parties involved outside classroom hours. It took place in appropriately equipped meeting rooms in both universities and was recorded for future reference and reflection on behalf of the students in order to be able to self- and peer-assess the task.

4. Research Methodology

Context and participants

This qualitative-quantitative case study took place during a 15-week semester with a total number of 25 students. Seven of these were male 2nd-year students enrolled in *English for Telecommunications* within the Master's Degree in Telecommunications Engineering at the Universidad de Las Palmas de Gran Canaria (ULPGC) and 18 (3 female and 15 male) were 3rd-year students enrolled in *Specialised English* within the Aerospace Engineering Degree at the Universitat Politècnica de València (UPV). The latter included 4 Erasmus students from Germany (1), France (2) and Poland (1). The learners all completed a commercial performance test; their level of English ranged between B1+ and B2 (according to the Common European Framework of Reference for Languages). Most students were male (86.4%). Over two thirds (72.8%) were aged 21 to 25, while slightly under one third (27.3%) were between 18 and 20. All students typically spent 90 minutes of in-class project groundwork per week.

Instruments and procedures for data collection and analysis

The qualitative and quantitative research instruments used aimed at measuring English language acquisition, development of debating skills and communicative performance levels

(Table 3). The instruments used for qualitative analysis comprised the researchers' observation of face-to-face and online group discussions.

Table 3 Research instruments and procedures

Research questions	Instruments used and Data collection	Analytical method
1. Did learners perceive the telecollaborative debate as being beneficial in terms of language intake and communicative development?	Pre- and post-project surveys	Qualitative & Quantitative
2. How did learners perceive that the telecollaborative debate had helped them improve their life skills?		

For the quantitative analysis, two anonymous surveys designed exclusively for this study were administered. The online pre-project survey gathered information regarding learners' expectations and attitudes towards learning English and how they felt about participating in a telecollaborative project with other non-native speakers of English. The pre-survey therefore served as a diagnostic test. It had 21 questions of different type (Multiple choice, Likert scale), organised in 4 sections: A. Demographics; B. Debates; C. Language Learning; D. Telecollaboration The post-project survey, which was filled out after the delivery of the debate and before students received their grades, referred to the extent to which the project had boosted their communicative skills in English, their motivations and self-confidence in speaking in a real-life task such as debate and their satisfaction upon conclusion. This survey was structured in 3 sections (A. Demographics; B. Debates; D. Telecollaboration) with 18 questions in total. The questions addressing the 2 research questions of this study will therefore be analyzed in the Results section.

Together with the surveys, the instructors' reflections of the entire process and of the debate were all taken into account as discussed in the Results and Discussion sections.

Digital tools

As shown in Table 1, the digital tools used to support telecollaboration were *Google+* [1] *Google Hangouts, Google Forms* and *Google Docs. Google+* was the platform chosen to create a community for students to introduce themselves, to interact and exchange ideas or multimedia information and to help the teams and the moderator plan the debate. *Google Hangouts* was used to perform the debate and *Google Forms* to create and administer the pre- and post- surveys. Lastly, the collaborative writing tool used by each team to share findings about the topic and useful sources of information was *Google Docs.* The instructors had access to their respective students' collaborative documents to enable assessment of written output. The online platforms were managed by the instructors and strictly restricted to the participants of the project.

Instant text and voice messaging systems such as *WhatsApp* and *Skype* were also used to communicate efficiently with team members. These were also used for synchronous video conferencing during the live debate for the remote team members to prepare rebuttals.

[1] *Google+* is no longer available but other platforms such as mewe.org may serve the same purpose.

Ethical consideration

The debate was recorded for educational and research purposes with prior consent from all the participants involved, thus allowing students to examine their performance critically, both individually and as a team.

5. RESULTS

This section deals with the qualitative-quantitative results of the project elicited from the data collected through the instruments mentioned above in terms of knowledge building, linguistic and life skills and multimodal communicative performance.

5.1. RQ1. Did learners perceive the telecollaborative debate as beneficial in terms of language intake and communicative development?

5.1.1. Comparative Data: Pre- and Post-project Surveys

The surveys provided comparative data of the learners' opinions before and after the ESP telecollaborative task took place. The pre-project survey responses revealed that only 40.9% of the students had no prior experience in participating in a debate although a significant 81.8% agreed that taking part in one would be a good way to demonstrate their knowledge of English. More than half of the students mentioned that it was their first time working with other students through telecollaboration (68.2%) and most of them referred to telecollaboration as a valuable learning community (81.6%) to experience online interaction (81.9%). The post-survey provided valuable insights with respect to the learners' degree of satisfaction in participating in the telecollaborative debate and queried the impact that the whole experience had had on their communicative skills.

Despite having measured the students' language level via commercially available EFL achievement tests, Question 4 in the pre-survey requested informants to identify their language level using the CEFRL grid. As shown in Figure 3, about two thirds of the students perceived they had progressed from B1 (intermediate) to B2 (upper-intermediate). In the pre-survey, nearly half of the students identified their initial language level as intermediate B1 (45.5%) compared to just over one third (36.4%) of them who chose B2, the target level in both ESP courses. The post-survey showed that 60% of the respondents believed they had progressed to a B2 level compared to 32% who still considered themselves at level B1.

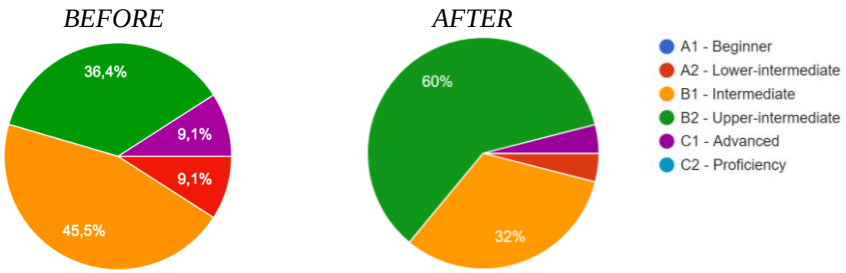

Fig. 3 English level according to students

Two questions addressed the learners' perceived improvement in language skills. On the one hand, through participating in a debate (Figure 4, dark brown illustrating pre-debate data compared to light brown for post-debate data) and, on the other, through participating in a telecollaborative project with fellow non-native students (Figure 5). Regarding the former, the data does not reveal a significant difference since their expectations matched their perceived gains. Figure 4 shows students felt they would improve their speaking skills (N=21, 95.5%) and enrich their vocabulary (N=21, 95.5%) and were under the impression that they, in fact, had done so after the project had taken place (N=25, 84% in speaking skills and vocabulary). The students placed listening comprehension in second place, both as a prediction (N=21, 81.8%) and as an assertion after the debate (N=25, 80%). However, although half of the respondents predicted their progress in grammar (N=11, 50%), only approximately half of that amount (N=6, 24%) acknowledged having improved in that area. Despite their lower expectations in terms of reading comprehension (N=4, 18.2%), twice as many responded having improved this skill (N=8, 32%). About writing, their initial thoughts (N=8, 36.4%) and their afterthoughts (N=9, 36%) practically coincided.

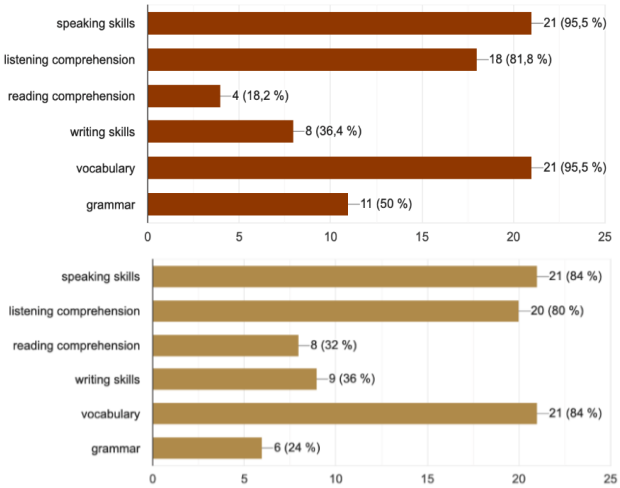

Fig. 4 Perceptions in language skill improvement, according to pre- & post-surveys

When asked whether students foresaw telecollaboration could (pre-survey) or had helped them (post-survey) develop their communicative skills, participants also reported favorable gains. If we add up the number of those who expected their language skills to improve (i.e., those who answered 5, 6 or 7 on a 7-point scale), these amounted to 76%, exactly the same as the gains reported after the project (Figure 5). The learners' expectations matched the outcomes.

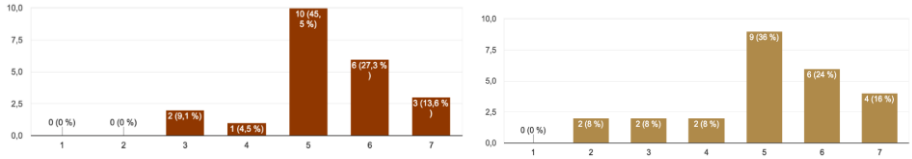

Fig. 5 Perceptions in communicative skill progress, according to pre- & post-surveys

5.1.2. Teachers' discussion

Additionally, it seems that having chosen such a complex topic for the debate provided participants with ample options to demonstrate critical thinking abilities and find appropriate propositions and scientifically supported data to explain, justify or refute their arguments confidently. Figure 6 shows the structure for the first part or subtopic of the debate ("Energy and environmental reasons"), specifying all the interventions for the three teams (in favor, against and audience), guided by the moderator's mediations and time limitations:

TOPIC: "How will technologies change society: Is space garbage justified for connecting the world/for communications?" SUBTOPIC 1. Energy and environmental reasons	
(+) Team	(-) Team
Moderator introduces topic, teams and subtopic	
▪ Arguments in favor (2 mins.) (1 ULPGC student)	
	▪ Arguments against (2 mins.) (1 UPV student)
▪ Arguments in favor (2 mins.) (1 ULPGC student)	
	• Arguments against (2 mins.) (1 UPV student)
5-minute break for each team to prepare **rebuttals** (in two separate break-out rooms via video-conference calls)	
	▪ Rebuttal 1 - (1 UPV student) ▪ Rebuttal 2 - (1 ULPGC student) ▪ Summary of rebuttals - (1 UPV student)
▪ Rebuttal 1 - (1 UPV student) ▪ Rebuttal 2 - (1 UPV student) ▪ Summary of rebuttals - (1 UPV student)	
Audience poses 2 questions to the + Team ▪ (1 UPV student) ▪ (1 UPV student)	
▪ Answer Q1 ▪ Answer Q2	
Audience poses 2 questions to the - Team ▪ (1 UPV student) ▪ (1 UPV student)	
	▪ Answer Q3 ▪ Answer Q4
Moderator makes concluding remarks and closes session	

Fig. 6 Structure for the first subtopic of the telecollaborative debate

5.2. RQ2. How did learners perceive the telecollaborative debate had helped them improve their life skills?

5.2.1. Comparative Data: Pre- and Post-Surveys

Learners reported how they expected the telecollaborative debate to help them (Figure 7) and how they perceived it had in fact helped them after the project took place (Figure 8). On the one hand, the skills relating to public speaking were primarily targeted before the debate and acknowledged as having succeeded upon completion by most learners. An overwhelming 95.5% (N=21) of the respondents hoped they would gain skills in public speaking, however, 68%, (N=17) reported having achieved this. Although all the skills queried about were, to a greater or lesser extent, selected (Figure 7), the other skills that the learners most expected to improve were:

- Being a better critical thinker (72.7%)
- Articulating their thoughts (72.7%)
- Thinking on their feet (learning to think and react quickly) (72.7%)
- Controlling their emotions when speaking in public (72.7%)
- Improving their presentation skills (72.7%)

Additionally, just over half of the students (59.1% N=13) hoped to learn to collaborate with others. This indicates that even at the outset, they were aware that team effort would be necessary to accomplish successful outcomes.

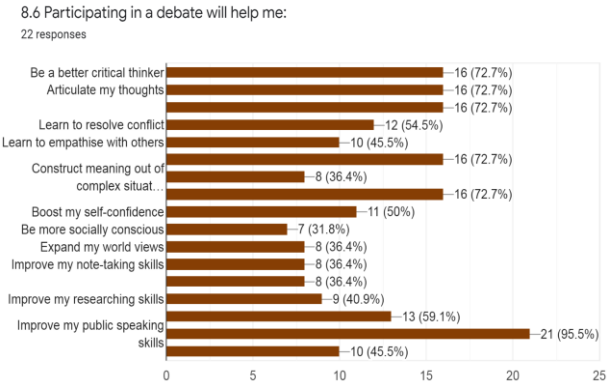

Fig. 7 Responses to pre-survey Q8.6

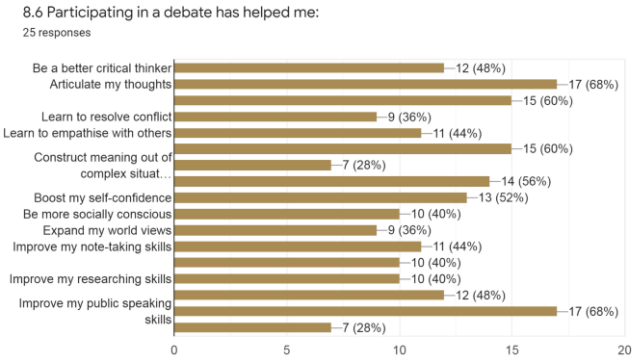

Fig. 8 Responses to post-survey Q8.6

The results of the post-survey were satisfactory although slightly more realistic. Learners nevertheless reported gains in all the skills queried about (Figure 8). As well as public speaking, the students also acknowledged having improved in the following areas:

- Articulating their thoughts (68%)
- Controlling their emotions when speaking in public (60%)
- Thinking on their feet (learning to think and react quickly) (60%)
- Improving their presentation skills (56%)
- Boosting their self-confidence (52%)

The other reported gains were below the 50% mark. Comparing both graphs, we can see that "being a critical thinker" has one of the highest expectation rates in the pre-survey, whereas it did not reach the midpoint in the post-survey. Conversely, whereas boosting their self-confidence was not initially expected, the results showed the reverse.

The students' motivation to learn English and their self-confidence in speaking the language was addressed in both surveys. We can safely say that students were highly motivated to learn English through the debate project since 90.8% (N=20) of them selected option 5, 6 or 7 out of the 7-point scale. Additionally, upon completing the project, the respondents considered their level of confidence to perform in English was in the middle range, categorizing it as *fine* (68%, N=17), followed by 20% (N=5) who described it as being *poor*, and 12% (N=3) who reported being highly confident in English (Figure 9).

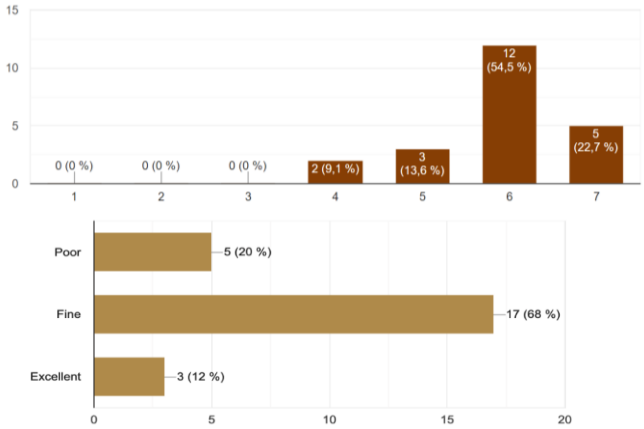

Fig. 9 Motivation (*before the debate*) and Self-confidence (*after the debate*)

6. Discussion

6.1. RQ1. Did learners perceive the telecollaborative debate as beneficial in terms of language intake and communicative development?

The observed learning outcomes suggest that the activities that should be put into practice to enhance language acquisition in a telecollaborative debate are primarily based on interaction and multimodal communication, considering both input and output. The findings lead us to believe that the following activities should be included:

- Exposing learners to specific/contextualized vocabulary
- Reading academic/scientific articles

- Watching/Listening to educational sources of information
- Becoming acquainted with formal language
- Becoming acquainted with language to elaborate on argumentations and explanations
- Becoming acquainted with the rhetoric of persuasion
- Practicing techniques to argue/explain/justify and rebut/refute/disprove
- Practicing public speaking and presentation skills

Moreover, a few soft skills were also brought in and performed by the participants; namely, engaging in dialogue, using tools effectively to access and exchange information, displaying people skills (i.e., talking effectively and empathizing accurately), argumentative literacy, communicative and social skills (i.e., to facilitate interaction and communication). All enabled these ESP learners to navigate within a given communicative environment and work well with others, perform the telecollaborative debate task, and achieve their goals onsite and offsite (Radosavlevikj, 2020).

The results confirm that what is innovative in this telecollaborative debate task is not so much how the learners acquired argumentation skills, but how they delivered the message and how this message was presented and conveyed in a contextualized real-life remote communicative scenario, supported by a collaborative ubiquitous platform. The findings underline that designing the communicative procedures for the telecollaborative debate is as important as the final delivery. As revealed by García-Sánchez's research (2020), the main goal of the debate was to develop a rich discussion based on solid arguments, interventions and rebuttals, using different forms of multimodal and multimedia communication (Figure 10). Moreover, as pointed out by Polacsek and Cholvy (2011), we can state that the three features characterizing an argument (*a proposition, an agent or the person who states the argument, and the evidence)* have been at the heart of the telecollaborative ESP debate, as evidenced by the written documentation produced by the teams to prepare the live debate, which was logically structured by the opposing teams, the audience and the moderator (Van Eemeren & Henkemans, 2016). Through scrutinizing each of the teams' written collaborative scripting of the debate for the purpose of building their arguments, it seems that students had progressively included instances of persuasion geared towards leading their opponents and the audience to believe their theories.

Fig. 10 Real-time telecollaborative interactions during the live debate

The language gains reported by learners, especially in terms of vocabulary acquisition and communicative oral skills (listening and speaking) are in line with those reported by Gimeno (2018) in a telecollaboration project with Spanish learners of English and North American learners of Spanish. Developing communicative skills and collaborative aptitudes were necessary to face the telecollaborative task successfully. This leads us to believe that using English as a lingua franca as it was the case here, does not hinder or deter improvement of the target language, nor does it prevent them from further developing their communication skills.

6.2. RQ2. How did learners perceive the telecollaborative debate had helped them improve their life skills?

The results support the fact that scientific knowledge can be represented in various multimodal forms, without forgetting the importance of verbal and nonverbal communication in the foreign language. Multimodal communication today is a necessary lifelong learning skill that has become an integral part of current interactive learning environments where we have become knowledge builders at a local or global sphere (Danielsson & Selander, 2016; O'Dowd & Eberbach, 2004; Plastina, 2013; Taguchi & Ishihara, 2018).

The findings clearly encompass a combination of knowledge acquisition, argumentation, collaboration, enhancement of 21st century life skills and reassurance of metacognition and reflection in education (Altıok et al., 2019; Bell, 2007; Haukås et al., 2018). These findings are consistent with those of Castillo Losada et al., (2017), Dörnyei (2009), Dörnyei and Muir (2019), and Zimmerman (2008). When students engage in authentic, contextualized tasks with challenging topics they find appealing, they are more receptive and motivated.

The results also reveal that the telecollaborative debate provided participants with more opportunities to interact with fellow learners and collaborate in planning and preparing their argumentations and rebuttals. Moreover, the debate task went a step further than having learners present clear ideas and provide supporting evidence, they also had to use English domain-specific vocabulary, question and refute arguments, which in all probability boosted their efficacy and self-confidence, not just regarding content but also in terms of body language and pragmatics (Zhang & Ardasheva, 2019).

As reported by the students themselves, participating in this semester-long project helped them articulate their thoughts in order to build convincing arguments, it had aided them to overcome the fear of having to speak in public, and to learn to think on their feet and react swiftly to an opposing opinion. The experience was seen as beneficial to construct meaning out of conflict and control one's emotions in public.

In line with Alvarado's study (2017) on the use of drama techniques to encourage speaking in English, a debate requires preparation and, to a certain extent, training and performative skills that combine verbal and nonverbal communication. Besides, García-Sánchez (2019) underlined the challenges that ESP learners necessarily encounter when delivering English public speaking presentations in terms of linguistic, paralinguistic and sociolinguistic verbal and nonverbal communication.

The life skills students reported having gained from the project derived from two interconnected sources: the telecollaboration project itself with students from another university and, within it, the process leading to the debate. The participants acknowledged having become better critical thinkers, more socially conscious, more empathetic with

others through the debate task, as well more proficient in digital skills and a sense of belonging to a learning community, the members of which were all collaborating to reach a common goal. This is consistent with the findings reported in Gimeno (2018) where students participating in a telecollaboration project from Spain and the USA perceived having improved research, team-working and organizational skills.

7. Conclusions, Limitations and Future Work

This research has comprised three related areas: telecollaboration, ESP and the development of multimodal communicative skills through building arguments in a debate. The study has attempted to analyse the learning activities needed to scaffold a telecollaborative debate, aiming to boost learners' communicative performance when using argumentative language in English for engineering purposes. Moreover, this experiential, collaborative, student-centred, task-based project was planned according to Argumentative Theory and guided by a communicative/performative approach to ESP through the means of a telecollaborative ubiquitous environment.

The study reports that both communicative competences and several language and life skills are required to perform well in a debate in English. An ESP telecollaborative debate needs to be well-structured with fully responsive members in their collaborative learning tasks, which, at the same time, entail individual and teamwork both online and face-to-face. A telecollaborative debate also implies integrating soft skills such as critical thinking and creativity by means of well-built arguments, well-processed rebuttals and a correct organization of the debate with clear turns and time slots so that everyone can contribute to this real-life task, which will vary depending on the topic and the level of communicative dexterity of the participants.

The analysis investigated the different modes of communication used by the learners, paying special attention to the language and life skills required to scaffold a successful telecollaborative debate, on the one hand, and to increase students' communicative, linguistic performance, on the other. As Fortanet-Gómez and Ruiz-Madrid (2016) pointed out, speaking implies argumentative multimodal discourse and this telecollaborative experiential debate has provided the Spanish ESP debaters an authentic foreign language scenario to interact and perform different semiotic multimedia modes by means of verbal interaction, images and non-verbal communication.

The study, however, also has a number of limitations. First, the sample size is limited to a single case study of university students in the field of English for engineering purposes from two Spanish universities. It would not be possible to generalize the results to learners in other ESP fields and in other international universities, so it would be interesting to compare how the debate would be influenced by intercultural communicative awareness in future studies. Secondly, the predominance of male students, in contrast to a balanced mix of males and females, does not accurately reflect differences in communicative performance towards the ESP telecollaborative debate. Finally, a detailed examination of the most common structures used by ESP debaters to elaborate arguments and persuasive instances will offer analytical findings regarding language acquisition and communicative performance.

To conclude, more extensive research in telecollaborative debates for English language learning is needed. The authors of this article intend to extend their research on a larger scale and apply Kaewpet's Argumentation Quality Criteria & Scale rubric (2018)

to telecollaborative debates for global EFL and ESP learners. Ultimately, Activity Theory (i.e., understanding human activities as systemic and socially situated phenomena), together with a goal-oriented teaching framework to conduct telecollaborative debates can be developed into a practical tool for international students in different professional ESP contexts. Synchronous telecollaborative interactions could then be analyzed in a comparative study, using the debate as a task that comprises not only knowledge building, but also the development of multimodal and multimedia communicative skills in English language acquisition.

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Review research paper

EMPLOYING STUDENTS' CREATIVITY AND COMPUTER SKILLS: USING INFOGRAPHIC-CREATION AS A TOOL IN BUSINESS ENGLISH CLASSES

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Abstract. *The article will focus on the use of infographics in teaching Languages for Special Purposes (LSP). The benefits of using infographics in marketing, tourism and other business areas are well documented and business students profit from learning how to use and create these tools of information dissemination. In the classroom, infographics can be used on two different levels: firstly, they can be an input to students to facilitate learning and secondly, students can create infographics themselves.*
The first part of the article will focus on using infographics as an input. Infographics have been found to accelerate the learning process: The brain processes images faster than text and there is evidence to show that using images together with text enhances understanding, speeds up learning and makes it easier to recall information. Images in general and infographics in particular also help visual learners who find it easier to learn by viewing charts, maps and diagrams instead of words.
In the second part of the article, I will argue that when students create infographics, they reap an even bigger benefit. Making such a combination of words and images requires a clear understanding of the text read and a deep knowledge of the topic. Such a task requires an ability to select and organize relevant information, use critical thinking and exercise creativity. It also builds students' transferable skills, such as, visual literacy and computer skills. Furthermore, students' motivation is also enhanced when they feel that they are learning something that is seen as a modern, "cool" way of communication with their peers or business partners.
In the third part of the article, I will make recommendations on how to incorporate infographic-creation tasks into an LSP classroom.

Key words: *infographics, information retention, digital tools for teaching, note-making, Business English, LSP*

1. INTRODUCTION: WHAT ARE INFOGRAPHICS?

Information graphics or infographics are graphic visual representations of information, data or knowledge intended to present information quickly and clearly. They are usually a mixture of text and images designed to make the data easily understandable. Infographics

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are useful because they communicate a message quickly, simplify the presentation of large amounts of data and make data patterns and relationships easier to spot. All of these are important considerations in our time-poor world, when we need to digest a lot of information in a short time.

Infographics are not to be confused with data visualization. Infographics use visual tools not only to represent data in an easier-to-understand way, but they combine text, images and data visualization to tell stories, to transmit more complex ideas.

> "Data visualization alone is not the same as infographics but, rather, a tool used by designers to create infographics. Infographics can convey a certain subject in a story-like presentation using a variety of graphical elements and text to present an introduction, details, and conclusion, whereas data visualization only provides a snapshot of a single moment within the story (Dur, 2014, p. 41; Islamoglu et al., 2015, p. 34). In sum, data visualizations are isolated representational forms, while infographics are powerful standalone representations that convey an entire message quickly and clearly "even without accompanying text" (Davis & Quinn, 2014, p. 16; McDermott, 2014, p. 37)." (Alrwele, 2017, p. 105)

Visual representation of data and information is not a new phenomenon, it has been around for thousands of years: maps, the periodic table, famous examples of early infographics, such as "Ancient Egyptian hieroglyphics, or Leonardo Da Vinci's illustrations of the human anatomy in the 16th century" (Ferreira, 2014) are often cited in the literature. Journalists have also long used infographics to make news items more attractive and easier to understand. By the 1980s, when computers became widely available, "*The New York Times* regularly published sophisticated infographics, whereas *USA Today* started publishing infographics as a way of delivering the news daily to serve information snack-style by way of simple polls turned into easy-to-digest nuggets" (Ashman and Patterson, 2016, p. 615).

Worldwide interest in infographics (as demonstrated by Google searches on the term "infographics", See Fig. 1) started to grow in February 2009 (5 on a scale of 1-100) and reached its first peak in February 2014 (94). While this interest dropped somewhat afterwards (60-80), March 2020 brought a new peak of interest (100). More recently, the data shows that there are fewer searches made for the term, compared to the peak interest, but it is still a term that is looked up quite frequently.

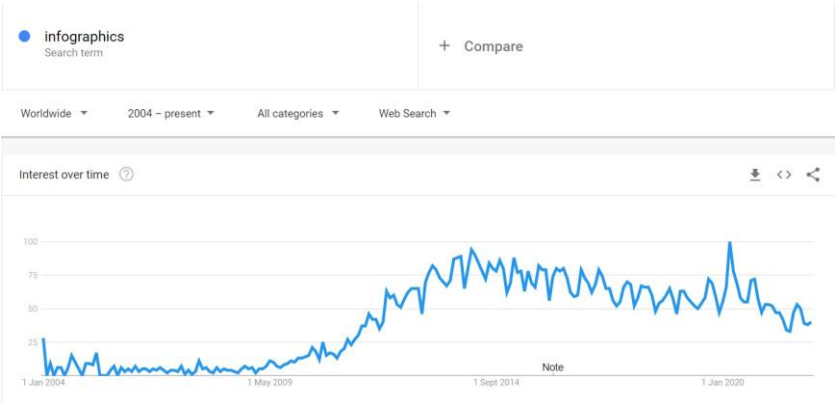

Fig. 1 Google Trends: Infographics (Accessed: 2 Feb. 2022)

1.1 The reasons for the rising popularity of infographics

There are several reasons for the rise in popularity of infographics. One line of explanation has to do with our need to access and process information ever-faster. The reason why infographics would do this better lies in how the human brain works: we digest information coming from pictures faster than information from reading texts. Additionally, we retain the information gained from pictures longer as well. "Approximately 50% of the brain is dedicated (directly or indirectly) to visual functions" (Smiciklas 2012, p. 7). Studies have shown that the brain decodes images much faster than texts. This is because of "the way the brain handles information. It processes data from pictures all at once but processes texts in a linear manner" (Smiciklas 2012, p. 7), that is, it treats each letter as a separate symbol to be decoded.

> "Pictures are not only more effortless to recognize and process than words, but also easier to recall. When words enter long-term memory they do so with a single code. Pictures, on the other hand, contain two codes: one visual and the other verbal, each stored in different places in the brain. The dual-coding nature of images allows for two independent ways of accessing visual memories, increasing the odds of remembering at least one of them." (Dewan, 2015)

The fact that people store and recall information more effectively if images are involved in transmitting the information has an impact on how people will later act on the information gained: studies have found that "people following directions with text and illustrations do 323% better than people following directions without illustrations" (Mawhinney, 2018).

The benefits of increasing the speed of decoding information and raising the likelihood of retaining this information become obvious when we consider two phenomena: firstly, our way of reading online, secondly, the fact that people today are inundated with a constant flow of information that needs to be decoded and remembered.

Research shows that people only skim and scan text they find online: "the average person will read only about 20% of the words on a webpage." Additionally, our attention is constantly divided between multiple digital channels to maximize our access to information: this is the behaviour pattern called Continuous Partial Attention (Smiciklas, 2012, p. 12). Grabbing the attention of distracted readers online can be very important for businesses. "Eye-tracking studies show internet readers pay close attention to information-carrying images. In fact, when the images are relevant, readers spend more time looking at the images than they do reading text on the page" (Mawhinney, 2018).

While people crave information and search for it, we also often feel overwhelmed by it. The amount of information online is immense and it is growing rapidly: "From 2013 to 2020, the digital universe will grow by a factor of 10 – from 4.4 trillion gigabytes to 44 trillion. It more than doubles every two years." (Turner, 2014). Under these circumstances it is clear why schools, media organizations and businesses want to make sure that they can communicate with the highest efficiency.

Infographics are powerful tools of communication because they combine text and images and make it easier and faster for readers to get information. "[O]n their own, text and graphics are both useful yet imperfect methods for communication. … Combining text and graphics allows communicators to take advantage of each medium's strengths and diminish each medium's weaknesses" (Miller and Barnett 2010). Infographics can make large amounts of information easier to digest. "Some infographics translated to text

alone would total several pages. Nobody would read that. Anyone who does presentations knows information is retained better when accompanied by visuals." (Sally Falkow, president of online newsroom provider PRESSfeed, quoted in Zuk, 2011). As a result, infographics often replace texts (articles, reports, etc.) in offline and online communication.

The second line of reasons for why infographics are gaining in popularity is their shareability and impact. In the age of social media, one measure of human and/or business success is the number of people we can reach and influence. While this may seem superficial on the personal level, businesses can translate their social media presence into actual numbers of consumers and profit. "Visual storytelling helps businesses, marketers and communications professionals reach their target audience in more meaningful ways than virtually any other type of medium" (Conner, 2017). "Infographics can increase web traffic by up to 12%." (Mawhinney, 2018)[1]

2. USING INFOGRAPHICS IN THE CLASSROOM

Having discussed the benefits of infographics in general, it is clear that business students profit from using infographics for learning about new topics and even creating infographics.

Infographics can be used in two ways in the classroom: 1) infographics supplied by the teacher used as a tool to facilitate understanding of a topic and retention of information, 2) infographics created by the students themselves, where students have to actively think about a topic, create logical connections, organize information and then represent it in a visual form.

The first, less active use of infographics in the classroom is using infographics to disseminate information. One could argue that texts are tried and tested modes of information dissemination, however, today's students seem to prefer "visually appealing information resources with concise textual content" (Brigas& Ramos, 2015; Islamoglu et al., 2015 quoted in Alrwele, 2017, p. 104). "In a study conducted in 2011, Roehling, Kooi, Dykema, Quisenberry, &Vandlen (2010) stated that the new generation of students has been raised in a 'multimedia environment in which they rapidly shift their attention from one source of information or stimulation to another. As a result, these students tend to have a low tolerance for boredom and require high levels of stimulation to remain focused' (p. 2)." (Alrwele, 2017, p. 104)

Alrwele (2017) summarizes Lamb and Johnson's (2014) five uses of infographics for the purposes of teaching: 1) visually illustrating key concepts; 2) visually displaying complex relationships; 3) comparing information and visually representing the differences;

[1] To show how impactful infographics can be, let's look at the example of KISSmetrics (a web analytics service that tracks website visitors and records their behavior, allowing website creators to see how much they influenced the viewers of their website). KISSmetrics created 47 infographics to build organic search traffic. "Within a two-year period, KISSmetrics generated 2,512,596 visitors and 41,142 backlinks from 3,741 unique domains, all from those 47 infographics. (A backlink is a link on a webpage that points to your webpage. This is one of the ways that Google ranks webpages.) From the social media perspective, in the last two years, the infographics have driven 41,359 tweets and 20,859 likes" (Patel, 2012). Translated into the language of finance: KISSmetrics invested $28,200 into creating the 47 infographics ($600/infographic), buying the same amount of visitors, links and tweets to "try to game Google [to get the same favourable position among search results] and get the same results as we did at KISSmetrics, you would have spent a total of $1,072,905.80" (Patel, 2012).

4) making data more meaningful by providing analogies and examples; 5) presenting information as story, which makes this information more interesting and engaging. We could add a sixth use as well: improving the visual literacy of students, i.e., the ability to make meaning from, interpret and evaluate visual images.

Presenting information visually makes learning about a topic less work. The reason behind this has to do with cognitive load theory (CLT), which explains that when students are "less exposed to the cognitive load, which is the mental effort of the learner in the learning process" they can spend less time learning the information presented because they "can focus more on the content rather than trying to understand the way through which it is presented" (Afify, 2018, p. 207). Of course, it could be argued that making learning less demanding is, in fact, counterproductive and students should learn how to find key information in a text and focus on a topic without help. While this may be true, "evidence from neuroscience indicates that presenting information in multiple ways helps learners because it engages multiple channels for processing the information presented" ("Introduction to Visual Literacy: Learning and Visual Literacy," 2017).

Infographics can be very useful if the aim is to help students retain information. Firstly, the human brain retains information better if it is stored in two places of the brain, once as an image and once as verbal code, as opposed to just once as verbal code (see earlier discussion on dual-coding theory). Secondly, information retention can be additionally bolstered if we consider the story-like characteristic of infographics. A well-designed infographic presents information as a story and not a collection of disparate data. Studies have shown the effectiveness of infographics to "enhance students' comprehension and increase memory retention." One such study was carried out by Al Hosni (2016). In the study, two groups of students were given the same information, but in different formats: one group was given a text, the other an infographic. The group that was given the information via an infographic could retain the information much longer and more accurately than the control group.

Infographics can also be helpful for visual learners. A large part of the student population are visual learners[2]. These learners prefer to be taught through visuals (pictures, graphs, charts, videos, etc.), but usually most instruction rests on the written or the spoken word. These students could perform better if teaching methods better suited to their preferred learning style were offered.

2.1. The advantages of using infographic-creation for teaching purposes

The second, and more demanding use of infographics in the classroom is making students create their own infographics. If using ready-made infographics in class is beneficial for the learning process, creating them is even better.

When making an infographic, students have to "synthesize information, or analyze and summarize data" (VanderMolen and Spivey, 2017, p. 199) form logical connections and then present them in a clear and easy to understand way. A well-designed infographic shows a clear understanding of the topic.

Creating infographics requires similar reading and meaning-making strategies as taking structured notes (i.e. graphic organizers, Jiang, 2012). Reading for note-taking and

[2] There is no consistency in the data on the actual size of this student population, but it seems to be somewhere between 30% and 40%.

creating infographics requires that the note-taker understands the text both on the local and on the global level and mentally "constructs an organised representation of the text" (Weir & Khalifa, 2008, p. 4) which then can be put in a graphic form. Local comprehension entails understanding the words and individual sentences in the text, while global comprehension means being able to identify the general meaning of the text (Weir & Khalifa, 2008). When taking structured notes, the first step is to separate the important / relevant details from the unimportant / irrelevant. Once that is done, logical connections and relationships have to be established between the important terms and expressions. Successful notes or a well-done infographic reflect these logical connections.

Research also shows that a larger part of the brain is at work in global text comprehension than in word-level tasks (Aboud et al., 2016). This suggests that deeper cognitive processing can be expected from students searching for logical relations across the text while trying to establish its macrostructure (Sladoljev-Agejev, 2018). As a result, a higher level of retention and involvement with the topic can be expected when making notes or creating infographics.

VanderMolen and Spivey's (2017) experience with infographic-creation with a group of health economics students shows that students are motivated by the opportunity of creating infographics and respond well to this type of task. Students' feedback on the exercise was overwhelmingly positive. It was seen as a good opportunity for acquiring a useful new skill and also found the experience fun and engaging, more so than writing a short paper on the same topic. Additionally, 88% of students reported an increased interest in health economics after taking the course, while the control group's interest stayed the same.

The process of infographic creation improves the production side of visual literacy as well. Just as both reading and writing are considered an integral part of being literate, being visually literate involves being able to interpret and also create visual images.

2.2. Incorporating infographic-creation tasks into an LSP classroom.

Infographic-creation can be taught in many different courses, ranging from information sciences, life sciences, design, marketing, etc., to LSP. Each of these courses would have different intended learning outcomes, and thus a different focus and expectations when teaching and then evaluating students' work. An LSP class's focus has to be on language and communication. When communicating through an infographic, students need to research and understand a topic, choose relevant information (analyze and synthetize information), compose short and meaningful texts to be included in the infographic, organize information and use meaningful visual elements to support a strong and clear message. The learning outcomes are the following: While creating the infographic, students build their vocabulary in the LSP and learn about the topic researched, but even more importantly, they implement cognitive processes that are needed to create the infographic while using a foreign language for specific purposes.

Additionally, infographic creation in an LSP class is also an activity that combines the use of linguistic and computer skills in the classroom, i.e., it is an "interdisciplinary approach to learning of ESP contents." (Milošević, 2017) At the same time as improving students' LSP skills, they also develop their computer skills.

When incorporating infographic-creation into an LSP course, it is very important that students do not feel overwhelmed by the many different aspects of creating infographics (design, language, text, data usage and visualization, etc.), therefore they need to be given support and clear guidance on what is expected of them and how their work is to be evaluated.

2.3. How infographic-creation was introduced into Business English 3 at the Faculty of Economics and Business, University of Zagreb

Teaching with infographics was introduced in Business English 3 in 2018. This class is attended by 3rd - 5th year students with a range of different majors offered at the Faculty of Economics and Business, Zagreb (Tourism, Accounting and Auditing, Management, Finance, Trade and International Trade, Managerial Informatics, etc.).

Originally, making notes on a text was one of the tasks that students were graded on in Business English 3. Making notes is a topic that is introduced in Business English 1 and practised in Business English 2, which are compulsory courses for first-year students at the Faculty of Economics and Business, Zagreb. The intention in Business English 3 was to further develop this important skill. However, students seemed very unmotivated by this task and in general did not feel that it was a useful activity. This is the point when the thought of introducing infographics occurred. From the point of view of the students, it would be an opportunity to create something visually pleasing; it includes the use of a new computer program or application, and the learning of a real-life skill that students recognize as useful. Last, but not least, it is something different from their usual tasks.

From the teacher's point of view, creating an infographic brings all the advantages discussed above. Another reason why this exercise is of benefit lies in the fact that making an infographic based on a longer article involves focusing on a single message. A good infographic carries a single clear message, while articles often have more than one message that they want to impart to their readers. In the course of creating an infographic, students have to choose a message and be selective about what to include in the infographic in order to make an impact. Focusing on what is important and being selective with information is a cognitive skill that students need to practice.

2.4. How were students prepared for the infographic creation exercise

Business English 3 is a course where there is a large emphasis on reading and interpreting complex texts dealing with current topics of economics e.g., inequality, behavioural economics, universal basic income, just to name a few. Students have to read texts of 4-5 pages for class and answer questions based on the texts. This requires that they comprehend the article on both the global and the local level, understand key vocabulary, form connections, analyse information and make interpretations. The questions direct students to be able to focus on what is important in the text. In answering the questions, they have to practice their skills of interpreting, paraphrasing and summarizing information. All of these skills are also required for creating infographics.

In general, students are always encouraged to create notes on the articles they read, but one class is specifically geared towards creating notes on the article assigned for that week. During this class, we discuss and revise the effective use of bullet points and the importance of using different levels of notes. One of the common errors that students make when making notes is that they copy whole chunks of text instead of paraphrasing and summarizing important points. The other common error is putting all bullets on the same level, instead of structuring them in hierarchies and in that way indicating relationships in the text. These errors are discussed and better note-taking solutions are proposed.

Another class (3x45 minutes) is dedicated to teaching students about basic rules for creating infographics, and explaining to them the type of infographic they need to create for the class. The homework assignment for this class is for students to find two infographics:

one good and one bad. They have to give reasons for their choices. The students are helped in making this decision by a list of criteria provided by the teacher (See Appendix 1). All students are required to put their chosen infographics in the same shared Google document[3], and they are told to look through their colleagues' choices to avoid posting the same infographic twice and also to comment or think about the infographics in the document. This exercise is useful in a number of ways: 1) Students typically look up sites which list good and bad infographics. While choosing the two infographics to submit for class, they read about the reasons why some infographics are good or bad. In this way, they learn about the rules of making infographics. 2) By looking at many infographics, they familiarize themselves with the requirements of this form of expression. Learn about logical organization, flow, the importance of white space, etc. 3) Having to look at the infographics their classmates posted to make sure that they do not post the same infographic twice further increases the number of infographics they look at. They also read their colleagues' comments about the infographics posted. 4) The criteria they are given for selecting infographics are the same as those that I use when grading their work. In the course of the homework assignment they learn to look out for errors and best practices.

In the class on infographics, students are familiarized with the definition of infographics and their use in communication, marketing, recruitment, etc. is explained. This part serves to motivate students by showing them that reading and creating infographics is a useful real-life skill. Afterwards, basic rules for creating good infographics are clarified. Once they are familiar with the rules in theory, we look at their contributions of good and bad infographics. We go through some of the more interesting submissions and discuss what the strengths and weaknesses are. Then they are once again presented with the criteria of appraising infographics and with an infographic that has some good qualities but also some serious flaws (Appendix 2). Students are given time to appraise the infographic on their own, then a class discussion follows in which students are encouraged to criticise the infographic and discover its flaws. In the final part of the class, we look at one of the infographic creator applications available online (Canva). The basic functions and options are explained to students. This serves the purpose of quelling the fears of some students who feel that they might not be computer-literate enough to use such a program. After the class, further materials and tutorials on creating infographics are sent to students.

The task that students got in 2020 and 2021 was to create an infographic based on an article of their choice on BBC Worklife. Students were told to select an article of around 1700 words in length. By allowing students to choose their own article, my aim was to make students browse a large number of texts before choosing the article they would eventually turn into an infographic.

Before getting to work on the infographic, students had to submit their article to the teacher. Most often the articles were approved, I only asked students to find another article, if their choice was a listicle: an article that is basically a list of things with extended explanations. These types of articles would not be a challenge to turn into an infographic and would not really require the practising of the above described skills to create an infographic.

Students are given 4 weeks to complete the assignment, during which time they can ask for help with the technical part of creating infographics. The infographics are evaluated

[3] Shared Google documents allow students to work in the same document simultaneously.

based on the evaluation grid in Appendix 1. The grid is given to students before they start working on their infographics.

2.5. The infographics created by students

There were numerous very creative infographics submitted by students, some of which were included in a virtual exhibition of the best works on the website of the Faculty of Economics and Business. Students who created these followed the rules explained to them and made infographics which conveyed a strong message in an easy-to-understand way. Students also took obvious care to make the infographics attractive and reported that they enjoyed the opportunity to be creative and think about the best design for their topic.

Identifying common errors is always interesting from the point of view of the teacher, as it helps in improving teaching practices for future generations. Certain trends of common mistakes could be identified. One of these common errors was when students tried to include too much in the infographic. These students felt that everything that is in the article needs to be included in the infographic as well. By not being selective enough with the article and not limiting their work to just one main message their infographic lost focus and often became confusing. The inverse of this mistake could also be found. These students picked out only one thought to be represented on the infographic. Being too selective meant that the message was not conveyed in full or was not supported by proper arguments, resulting in an unconvincing infographic.

Another group of common mistakes concerns the use of text in the infographic. While it is alright to take some sentences from the original article, copying whole chunks of text into the infographic is not going to result in a coherent work. The language used in an infographic needs to be much more concise than in an article, therefore, students need to summarize and paraphrase for the purposes of the infographic. Students who did not understand this, ended up with infographics that had too much text on them, without effectively communicating the message they wanted to impart. The opposite of this error can also be found: this is when students include only very sparse notes on the infographic which then is not intelligible for anyone who has not read the original article.

Design issues were also found in some infographics. Infographic-creator programs offer ready-made templates to be used for infographics. If the wrong template is used, the infographic will be harder to follow and understand. For example, if an infographic is about the evolution of an idea, it is best to use a time-line template. If students instead select a comparison or mind-map template for such a topic, the infographic will not be successful. Students who choose the wrong template do so usually because they did not fully grasp the global meaning of the text, and/or are not clear about the message that they want to impart with their infographic.

Another design error is the wrong use of icons. As it was explained above, infographics blend visual representation of information with text to become more efficient forms of communication. Not taking advantage of this feature decreases the effectiveness of the infographic. In some cases, students used no or very few icons, and in others they used icons, but these were not related to the topic at all. They were there merely for their decorative value, not to promote the message. All of these issues make the infographic less effective.

3. CONCLUSION

Infographics are high-impact tools of communication that are becoming more and more common on the Internet. They facilitate easier comprehension of complex issues and easier retention of information.

Infographics are also useful learning tools. They can be used either 'passively' or 'actively.' 'Passive' use means that students are presented with information through infographics in class. These have the effect of aiding the understanding of a topic, motivating students to learn about a topic, helping the retention of information, promoting visual literacy and assisting visual learners.

The active use of infographics, i.e., their creation, carries further advantages: students learn to "synthetize information, analyze and summarize data" (VanderMolen and Spivey, 2017, p. 199). They employ higher level reading- and meaning-making strategies, learn to separate the relevant from the irrelevant, form logical connections and process information on a deeper cognitive level, which leads to a higher level of retention and recall. Infographic-creation expands visual literacy (production side) and computer skills. The fact that students learn a new skill which can be useful in their future profession is motivating.

Introducing infographic-creation into the syllabus in an LSP class encourages the expression of complicated information clearly, it requires a higher level of engagement with the material and thus engrains the target language deeper.

APPENDICES

https://www.dropbox.com/s/0f45w7dj7mlozku/APPENDICES-%20Infographics%20in%20LSP.docx?dl=0

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Review research paper

PEER AND TEACHER ASSESSMENT OF ACADEMIC ESSAY WRITING: PROCEDURE AND CORRESPONDENCE

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Abstract. *This paper reports on the assessment procedure of students' academic essays at an undergraduate course in English for Academic Purposes (EAP) at a business-oriented university during the school year 2020/21. Following the social constructivism paradigm (e.g. Vygotsky, 1962), the procedure employed peer assessment (PA) and teacher assessment (TA) of students' academic essays and was aimed at improving their essay writing performance. The paper further reports on the degree of correspondence between the grades awarded by teachers and peer assessors on a set of assessment criteria to investigate the potential of PA as a (a) learning tool and as a (b) supplementary assessment tool. Lower correlation and higher difference between mean grades awarded by teachers and peers on some of the assessment criteria may indicate the essay writing aspects students are weakest at. The results also implicate that certain adjustments in the assessment procedure need to be made in future iterations of the course, particularly with regard to assessment training, defining assessment criteria, and pairing multiple peer raters with a single teacher rater, as these changes may not only improve the benefits PA can bring, but also contribute to its validity.*

Key words: *peer assessment, teacher assessment, academic essay, English for academic purposes*

1. INTRODUCTION

In the ever-changing and diversified context of higher education, new assessment practices have been gaining prominence. Up to approximately 20 years ago, traditional assessment practices mainly focused on summative assessment, grades and marks awarded by teacher assessors only. With the emergence of constructivist paradigm, strongly influenced by complementary work of Piaget in psychology and Vygotsky in education, also came new assessment culture (Birenbaum, 2003:22). Priorities have been shifting away from summative towards formative assessment, or, in words of Havnes and McDowell (2008:7) from assessment *of* learning towards assessment *for* learning. Accordingly, students have become active participants in the assessment process, by assessing their own or the work of their peers, and thus using assessment as a "positive tool for learning" (Havnes, McDowell, 2008: 5). The greatest significance of *peer assessment (PA)* in education, according to Van Zundert et al. (2010: 270), lies in the fact

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that it empowers learners to become autonomous, actively participate in their own learning, and to collaborate with other learners. These three goals – empowerment, learner-centeredness, and collaboration in learning, are not only the products of PA, but also some of the major pillars of contemporary constructivism-based theories of learning.

Considering the benefits it may bring, we decided to introduce PA as a supplement to teacher's assessment (TA) of students' academic essays in an undergraduate EAP course at a business-oriented university. The procedure was carefully planned and implemented online during the summer semester of school year 2020/21. This paper outlines the assessment procedure and investigates the potential correspondence between TA and PA of students' written assignments with the aim of examining the potential of PA both as a learning tool and as a supplementary assessment tool.

The paper is structured as follows: after the Introduction, Section 2 places this study in a theoretical perspective by outlining the aspects of social constructivism-based theories of learning relevant for this paper, the concept of peer assessment, its use and reliability and validity in the context of teaching academic writing. Section 3 provides an outline of the study, including the information on the assessment procedure methodology and the results of measuring the correspondence between PA and TA. Discussion (Section 4) draws conclusions regarding the implemented assessment procedure and its advantages and limitations compared to similar studies. The last section summarizes the study, points to areas for improvement and offers suggestions for further research.

2. Literature Review

Constructivism, currently one of the leading theoretical positions in education, brought about a significant shift in the understanding of the nature of learning and teaching (Cooper 1993: 12). Constructivism-based learning theories maintain that learning is not a passive process and thus promote learner-centered instructional methods that encourage learners to be independent, autonomous, responsible and actively involved in the construction of knowledge (Hoover, 1996), Twomey Fosnot, 1989, Hein, 1991: 1–12, and Kiraly: 2005, 2012). Students are expected to be actively involved in the construction of knowledge, the role of teachers has become to support learners, promote their motivation and critical thinking rather than just to transmit knowledge. Social constructivism, drawing on the work of Lev Vygotsky (1886-1934) shares the common constructivist principles and beliefs, but also maintains that learning is a social process that occurs only when learners interact and collaborate with others, while knowledge is a social and cultural, rather than individual construct (Ernest, 1999: 4-5; Prawat & Floden, 1994: 37)

Constructivism and social constructivism have brought significant changes to the concept and practice of assessment. Since constructivist theories view learning as an "active process of sense making, instead of passive reception of knowledge, assessment tasks cannot just test reproduction, but must give space for production of knowledge" (Hawnes, McDowell, 2008: 20). New modes of assessment, such as peer assessment, performance assessment, learning logs, self-assessment, etc. (Havnes, McDowell, 2008:6) have gradually gained importance, as they make learners active and responsible for their own learning, assessment criteria transparent, and the whole learning environment balanced by aligning and integrating learning, teaching and assessment (Havnes, McDowell, 2008: 6-7).

2.1. Peer assessment

Peer assessment - PA (also known as peer review, peer evaluation or peer feedback, as in Zhang et al. 2020: 1) is the process of students providing feedback (and/or grades, though not as frequently) on a product or a performance of their peers (Falchikov, 2007: 132). PA can take many different forms (it may include assessing writing, portfolios, oral presentations, test performance, etc.), be formative or summative, involve a variety of methods and outcomes, be applied under various conditions and in different places (e.g. in classroom or online, face-to-face, written, etc.), be one-way, reciprocal or mutual (Topping 2003: 65), and include assessors and assessees who are, more or less, equal in status (Topping 2009:21). The main reasons for introducting PA, according to Topping (2003: 56), are to improve assessment quality or reduce its costs, since students, though less skilled, have more time and may produce equally reliable and valid assessment.

To be successful, PA needs to be carefully planned and executed. Topping (2009: 25-26), for example, lists a number of steps in organizing PA: a) developing initiative in cooperation with colleagues rather than alone, b) specifying the purpose, rationale and expectations, c) involving students in identifying assessment criteria, d) matching students by ability, e) providing training and practice, f) providing guidelines and other scaffolding, g) specifying activities and timeline, h) monitoring and coaching, i) examining the quality of PA against TA, j) moderating the validity and reliability of PA (if more PAs of the same work are available), and k) giving feedback to students assessors so they can improve their work. Similarly, Falchinkov and Goldfinch (2000: 317), based on meta-analysis of 48 PA studies in various discipline areas, provide recommendations for implementing PA using marks and grades. When student assessors are expected to grade the work of their peers, according to these authors, teachers should: a) avoid using very large numbers of peers per assessment group, b) ask their students to use an overall global mark rather than to expect from them to rate many individual dimensions, c) involve their students determining the criteria, d) attentively design and implement PA, etc., and they will be able to implement PA successfully in any discipline and at any level. Falchikov (2007: 132-133) also emphasizes that student involvement in identifying assessment criteria makes the assessment practice both transparent and beneficial.

In recent years, constructivism-based learning theories have renewed the interest in PA, especially in formative PA, and seen its potential both as a learning tool and an assessment tool (Van Zundert at al. 2010:270).

2.1.1. PA as a learning tool

If used as a learning tool, PA can bring many benefits to both student assessors and assessees: it can help them identify their own strengths and weaknesses, recognize gaps in their knowledge and target areas for remedial action, make judgments about high quality work, develop meta-cognitive and other personal and professional skills (Topping 2009: 26), improve social competencies and develop intellectually (Falchinkov 2007: 133). Additionally, peer evaluation helps reduce "the power imbalance between teachers and students and can enhance the students' status in the learning process" (Spiller, 2012:11), changes the teacher role by shifting focus from teaching to learning (Havnes, McDowell 2008: 6), etc. Despite initial anxiety assessees may feel upon acceptance of negative feedback (Topping 2003: 67), peer assessment helps peer assessees improve

their formative learning by encouraging them to clarify, review and edit their ideas during the assessment process.

The implementation of peer assessment procedures has proved to be particularly effective in evaluating students' academic writing across disciplines. Topping (2003: 70-71, 73), for example, provides an overview of papers dealing with PA of writing assignments in schools and HE institutions, mostly focusing more on its (positive) effects, substantial improvements in the effectiveness and quality of learning and subsequent learner performance, and concludes that the improvements are at least as good as the ones gained from teacher assessment (see, for example, Chaudron, 1983 and Birkeland, 1986 in Topping 2003: 77). A study similar to the one presented in this paper was conducted by Graner (1985): it compares final grades of students who rewrote their writing assignments after the initial draft was assessed by their peers, with the grades of students who did not get such feedback.

2.1.2. PA as an assessment tool

The benefits of using PA as an assessment tool have been somewhat debatable. Spiller (2012:2), for example, maintains that teachers, who otherwise follow the principles of constructivist learning, tend to restrain from involving students into the design and implementation of assessment tasks, but rather abide by traditional, teacher-directed forms of assessment. The competence of students to assess their peers has been investigated by a number of authors (Conway et al. 1993; Oldfield & MacAlpine, 1995; Sivan, 1996; Cheng & Warren, 1999; Kaufman & Schunn 2011). Competence is not questioned by teachers only, but by peers themselves, who challenge their own competence in relation to awarding marks, or express concerns about marking fairly and responsibly (e.g., Sluijsmans et al. 2001). Other limitations regarding students' competence in assessment involve lack of training and practice in assessing and concerns about determining criteria for assessing the work of their peers (Falchikov, 2007: 134). Peer assessment may also be potentially biased and partly influenced by social factors such as "friendship bonds, enmity or other power processes, group popularity levels of individuals, perception of criticism as socially uncomfortable or even socially rejecting and inviting reciprocation, or collusion leading to lack of differentiation" (Topping 2003:67).

Another concern about using PA seems to be the issue of its *accuracy*, i.e. its *reliability and validity*. Even though the terms reliability and validity are sometimes confused and used interchangeably (Topping, 1998: 257), Falchinkov and Goldfinch (2000: 288) maintain that *reliability* of PA is measured against the assessment of other peers, while *validity* is measured against teacher's assessment. Even though some authors see these as a concern, others claim that, if well planned and implemented, "peer assessment offers triangulation and *per se* seems likely to improve the overall reliability and validity of assessment" (Topping 2003: 68; Topping 2009:25). Since this paper outlines the use of PA as a supplement to TA, we will focus more on the issue of *validity*, i.e. "degree of correspondence between student peer assessments and the assessments made of student work by external "experts" such as professional teachers" (Topping 2003: 68), or "the extent to which students can accurately judge what they are asked to assess (…)." (Schunn et al. 2016: 2).

In most papers, it is generally assumed that the assessment made by teachers (i.e. experts) is highly valid (Topping, 2009: 25) and is therefore taken as a golden standard against which PA validity is measured using various statistical tests, such as Pearson

correlation coefficient, standard deviation, means, etc. Cho et al. 2006, however, questions the invincibility of teacher assessment, claiming that validity and reliability have to be observed from both instructors' and students' perspective, as these views may even be contradictory: i.e. while teachers consider an assessment valid and reliable, students may find the same one unreliable and invalid (Cho et al. 2006: 891-892), and list theoretical and practical reasons why peer evaluations can be just as reliable and valid as instructor ratings are.

An issue regarding the correspondence between TA and PA is the number of peer ratings against which a single teacher rating should be measured. While earlier papers (Cheng & Warren, 1999; Falchikov, 1986; Mowl & Pain, 1995; etc.) mostly establish correspondence of a single PA with a TA of the same work in order to determine the validity of PA, newer research (Cho et al 2006, Chang et al 2010, Schunn at al. 2016) compares the assessment of a single piece of work done by multiple peers to the one of a single teacher rater as it results in higher validity and reliability and may narrow down the gap between teacher and peer evaluation. Cho et al. (2006: 892) maintain that measuring one peer rating against one teacher rating is not optimal as it "confuses agreement with real ability to detect quality", and suggest that combined assessment of multiple peer raters (at least four) of a single piece of writing can be even more valid and reliable than a single teacher assessment.

Most research on the usage of PA in evaluating writing proves high or adequate validity, i.e. correspondence with TA (see, for example, Cho et al. 2006). Chang et al. 2010, however, report on using Web-based portfolio PA in high schools resulting in low level of reliability and validity and suggests that it may be improved by, among other methods, more advanced training that would provide students with more in-debt understanding of their task. In the context of assessing students' writing in foreign language learning, Zhang et al. (2020) study peer reviews of students' writing at the undergraduate level at a Chinese university over years and discover that the assessment of simpler language conventions (such as grammar or spelling) shows lower validity on the 1st year of study, while the validity of assessing higher-level dimensions of language is high regardless of the year of study.

The correspondence between PA and TA seems to depend on a number of variables, such as the context, level of the course, clarity of criteria, product or performance that is being evaluated, etc. (Topping 2003: 69). For example, correspondence is higher in higher level courses, and when assessment criteria were negotiated and discussed with students before the evaluation itself (Topping 2003: 69), and in sciences and engineering rather than in social sciences (Falchikov, Boud 1989: 424). PAs are generally more valid when supported by training, checklists, exemplification, teacher assistance, and monitoring (Topping 2009:25), and when the assessment process is structured and with clear rubrics (Cho et al. 2006: 893). Also, peer and teacher assessments tent to resemble more in the overall judgment of a product or process being assessed when they are asked to assess several individual dimensions of the product or process in question (Falchikov, Goldfinch, 2000: 287).

3. THIS STUDY

3.1. Context

English for academic purposes (EAP) has been a part of the curriculum at our business-oriented university since the school year 2017/18 as an elective course in the 8th semester of undergraduate studies. Even though titled English for Specific Purposes 3 (ESP 3, in addition to mandatory ESP 1 and ESP 2 offered early during undergraduate studies), its focus has been academic English or, more specifically, writing for general and specific academic purposes, and it was aimed at students who intended to pursue their academic careers either in the country or abroad. During the four iterations of the course, the syllabus and teaching methods have been adapted several times to suit the students' needs discovered in needs analyses and course satisfaction surveys (Meršnik & Anđelković 2019).

The initial conception to include several academic genres in the academic writing course was abandoned as it proved to be too overwhelming and time-consuming for students, while the actual achievement was not completely satisfactory. Consequently, during the last two iterations of the course (in school years 2019/20 and 2020/21) the focus was transferred to academic essay writing only. In both 2019/20 and 2020/21, during the online classes (introduced due to COVID-19 pandemic) students were exposed to various samples of academic reading texts belonging to diverse genres (research articles, reports, excerpts from academic course books, etc.) on various general academic topics and were guided, through scaffolded instruction, to produce segments (introductions, bodies, conclusions) of argumentative, descriptive, and narrative academic essays related to these topics. In 2019/20, the final exam consisted of a general academic vocabulary test (40% of the grade) and an academic essay writing assignment (60% of the grade) related to general academic topics covered during classes. Both the test and the written assignment were grades by EAP teachers; the assessment was therefore summative rather than formative and performed by the EAP teachers only.

Several changes in the type and the assessment of students' written assignments were made in the school year 2020/21. While the course syllabus, teaching materials, methods, and grading (60% for the essay and 40% for the test) remained the same, students were now able to submit their academic essay assignments during the semester rather than to write them during the exam session (the academic vocabulary test was still to be done in the exam period). This enabled students to reflect more on the topic they selected, carefully choose references, invest more time in writing, and consequently produce a higher quality work. Additionally, the topics students could choose from were more specifically related to students' fields of studies rather than general academic ones, and therefore expected to be more relevant for students' interests and future academic career.

In addition to the abovementioned, another significant change was the introduction of peer assessment of students' academic essays, alongside teachers' assessment, and the opportunity to submit corrected versions of the essays based on the first draft assessment if the author considered it necessary. Students – peers were not involved in the grading of the essays; peer assessment was rather used as a learning tool for both peer assessors and peer assessees.

The following sub-section will provide more details regarding the procedure of academic essay assignment, submission, assessment and resubmission in our EAP course.

3.2. Procedure

In the spring semester of 2020/21, the total of 53 fourth-year undergraduate students chose the course in EAP, while 36 out of them (68%) decided to submit the essay assignment during the semester rather than to write it in the exam session.

The 36 students were sent a link to a Google drive document containing a list of 71 topics for narrative, argumentative, and descriptive academic essays related to their field of studies and interests expressed in the needs analysis questionnaire conducted during the first class in the semester. To make the list more relevant to our students, the essay topics were designed with the assistance of content teachers at our university. Apart from choosing a topic of interest, each student was allowed to suggest changes and adapt the topic even more to his/her interests and knowledge; none of the students, however, used this opportunity. Students were also informed that the essays will be assessed by their peers anonymously, but that their final grade will not be dependent upon it (as also suggested by Topping 2009: 24).

The students were also presented with *Essay writing and assessment timeline* (Table 1) and sent a short *Essay writing checklist* (Fig. 1) to guide them through the writing process. The checklist only summarized the essay writing guidelines and instructions taught throughout the semester using various types of reading and writing exercises, assignments and numerous examples. There were no detailed technical essay writing guidelines as this was not considered important; students were only asked to submit the file in *.pdf* format, rename the document (*NameSurnameIDnumber*), and not to put their personal information inside the document itself, as this facilitates the handling of the document and anonymization prior to sending it for peer assessment.

Table 1 Essay writing and assessment timeline

Week 1 - 2	Teachers provide general information about the essay assignment
Week 3	Students choose a topic from the list provided
Week 3	Teachers send the Essay writing checklist to students
Week 4 - 6	Students write and submit the 1st version of the essay
Week 7	Teachers check students' work for plagiarism, make it anonymous, randomly match and send to students for PA together with the assessment form
Weeks 8 - 10	Both students and teachers work on the assessment and send the TA and PA forms to assessees / authors
Week 11 - 12	Assessees / authors rewrite and resubmit their essays based on TA and PA received
Week 13	Teachers hold focus group interviews with participants in the essay writing and assessment activity

BEFORE SUBMITTING THE ESSAY, MAKE SURE YOU:

- Choose at least two relevant sources pertaining to the topic and use it for your initial research
- Use in-text references or paraphrases of your essay. DO NOT plagiarize!
- List the references in the reference list following the essay
- Brainstorm and draft an outline of your essay, reread and redraft the first version
- Stick to the essay type printed in the brackets next to the topic (defend, describe, discuss) and its structure
- Use adequate academic vocabulary and formal language
- Be careful of the structure of each paragraph – topic sentence, supporting evidence, concluding sentence.

Fig.1 Essay writing checklist

Following the submission of the first version of the essay (approximately three weeks after the topics had been chosen), the submitted documents were checked for plagiarism using *Turnitin* plagiarism detection software; a third (12 out of 36) was returned to the authors for revision as these essays displayed more than 10% similarity with various sources (excluding direct quotes). They were asked to resubmit the corrected essay versions before they are forwarded it for assessment.

3.3. PA and TA methodology

Upon collection of all the 36 essays (including the ones resubmitted after plagiarism check), students' names and other personal information were made anonymous and each student and his/her essay was assigned a number (01-36).

An assessment form, previously created in Microsoft forms by adapting the one devised in Mowl & Pain (1995: 329) was used for both teacher assessment and peer assessment of students' work. The assessment form consisted of 13 statements, or 13 assessment criteria, which both peer and teacher assessors were expected to mark on a 5-point Likert scale (1-lowest, 5 – highest grade). The statements were divided into three categories: structure and content (statements 1-8), language (9, 10, 11), and references (12, 13).

Students were randomly matched for peer assessment and not familiar with the grades teacher assessors awarded for the same work. The two EAP teachers divided the essays into two groups, so each teacher assessed 18 essays. Each student assessor was sent an anonymized essay and a link to the assessment form, and the information on the peer assessment deadline. Students were informed that the submission of the filled-out form does not bring them additional points, but is a precondition for being graded in the course. No additional instructions about the form were provided, but students were encouraged to approach teachers with questions if needed.

Upon deadline expiry, the two teachers collected the assessment forms, sent each student both teacher and peer feedback on his/her work, and informed the students about the possibility of resubmitting their work after making alterations based on the two assessment forms. Thirty-two out of 36 students decided to submit the second version of the essay for grading, while only four students did not find this necessary.

At the end of the course, two focus group interview sessions were organized to learn about students' views on this kind of assessment procedure, its effectiveness, and ways of adapting it for future generations.

3.4. Results

The same assessment form was used by both teachers and peers. The average time teachers took to complete the form for each essay was 28 minutes and 36 seconds, while peers took 21 minutes and 21 seconds. The total of PAs and TAs submitted was 36, corresponding to the number of students who submitted their essays.

To measure the correspondence between PA and TA, the replies to the closed questions in the assessment form were compared using means ($\bar{x}1$ and $\bar{x}2$), standard deviations (SD1 and SD2) and Pearson correlation coefficient (r) (Table 2).

Table 2 PA and TA correspondence

No	Criterion	N	PA		TA		PA - TA correlation	
			PA mean ($\bar{x}1$)	PA standard deviation (SD1)	TA mean ($\bar{x}2$)	TA standard deviation (SD2)	PA-TA means difference ($\bar{x}1$-$\bar{x}2$)	Pearson correlation coefficient (r)
1	The essay has a clear and logical structure (there is an introduction, middle section(s), and a conclusion)	36	4.63	0.76	4.36	0.79	0.27	0.18
2	The introduction provides a clear outline of what the essay is all about.	36	4.53	1.25	3.36	0.73	1.17	-0.11
3	The conclusion draws together the important points made in the middle sections of the essay.	36	3.95	1.48	2.97	1.11	0.98	0.36
4	The essay clearly answers the essay title.	36	4.5	1.16	4.17	0.73	0.33	0.25
5	The essay structure is appropriate for the essay type in question (describe, discuss, or defend).	36	4.55	1.36	3.53	0.69	1.02	0.23
6	Each paragraph represents one idea / point of view.	36	4.34	1.14	4.11	0.88	0.23	0.32
7	Each paragraph contains a topic sentence.	36	4.39	1.27	3.33	0.86	1.06	0.24
8	Each paragraph contains a concluding sentence.	36	4.16	1.29	2.78	1.05	1.38	-0.02
1-8	STRUCTURE AND CONTENT	36	4.31	1.21	3.57	0.85	0.74	0.18
9	The essay is generally readable, interesting and well presented.	36	4.18	0.89	4.19	0.80	-0.01	0.23
10	Grammar and spelling are used properly.	36	4.32	0.66	4.28	0.74	0.04	0.28
11	The author uses appropriate (academic) vocabulary.	36	4.45	0.93	3.78	0.80	0.67	0.42
9-11	LANGUAGE	36	4.32	0.83	4.08	0.78	0.24	0.31
12	The essay draws upon relevant literature.	36	4.63	1.43	2.67	0.83	1.96	0.30
13	The sources used in the essay are acknowledged by properly and consistently using one style of referencing.	36	4.34	1.29	2.33	1.10	2.01	0.51
12-13	REFERENCES	36	4.49	1.36	2.5	0.96	1.99	0.41
TOTAL		36	4.37	1.13	3.38	0.86	0.99	0.30

The comparison between grades awarded by teachers and peers shows that the mean grade awarded by peers ($\bar{x}1$) is consistently higher than the one awarded by the teachers ($\bar{x}2$); the overall difference between the means is ($\bar{x}1$-$\bar{x}2$=0.99). Individual criteria, or sets of criteria, however, differ in TA-PA means difference, with the criteria set C, related to

the relevance of used literature and proper referencing, showing the greatest difference ($\bar{x}1$-$\bar{x}2$=1.99), and set B, related to language use), showing the biggest similarity ($\bar{x}1$-$\bar{x}2$=0.24). When we look at the criteria individually, the mean grades seem to be almost equal for criteria that refer to the overall judgment of the essay (1 - the structure of the essay, 4 – the connection between the essay title and the essay content, 6 - the coherence and consistency of each paragraph, 9 – general impression of the essay's readability, and 10 – the use of grammar and spelling). There is approximately one grade difference in the assessment of the contents of introduction and conclusion (criteria 2 and 3), the appropriateness of the essay type chosen (5), the existence of topic sentence (7), and slightly more similar mean grade for the use of academic vocabulary (11).

In order to look at the correspondence between the PA and the TA of academic essays more closely, we have calculated the Pearson correlation coefficient (r) for each of the criteria and set of criteria in the assessment form. On the average, there is a low positive correlation (r = 0.3) between TAs and PAs. When we look at sets of criteria, the highest correlation (though still low) is shown with set C (r=0.41), and slightly lower with sets B (r = 0.31) and set A (r = 0.18). If we observe individual criteria separately, a very low negative correlation is detected with teacher's and students' grades regarding the structure of the introduction (no. 2, r = -0.11) and the existence of concluding sentences in each paragraph (no. 8, r = -0.02), while the highest correlation between TAs and PAs is related to the consistent use of a referencing style (no. 13, r = 0.51).

With regard to SD values, teachers' grades generally show higher values for all criteria, apart from no.1 and no. 10, where SDs are almost equal. When we observe sets of criteria, both TAs and PAs show the lowest SD with regard to set B – the language of the essay, and the highest with set C – proper referencing. In terms of individual criteria, the lowest standard deviation in TA is the one regarding the use of grammar and vocabulary (criterion 10, SD2 = 0.659,), while for PA it is the one regarding the essay type (criterion 5, SD1 = 0.686). The highest dispersion of teacher's marks regards the structure of the essay conclusion (no. 3, SD2=1.483), and for students it is the way sources are acknowledged in the essay (no. 13, SD1=1.097). The highest similarity between SDs in teachers' grades and peers' grades was for criteria related to the proper use of language (criteria 9, 10, 11), essay structure (criterion 1), and proper and consistent referencing (criterion 13). The lowest similarity between SDs is observed in grades related to the content of the introduction (no. 2), essay type (no.5), the relevance of literature (no. 12).

4. DISCUSSION

Generally speaking, the results presented above indicate the students tend to give their peers higher grades than the teachers, as indicated by the overall means and SD values above. High grades may be the result of students feeling less competent (as also indicated by Sluijsmans et al. 2001, Falchikov 2007: 134), or being biased and hesitant to criticize (Topping 2003: 67), so they tend to grade their peers highly. Students' grades are also less diversified, which corresponds to Topping's study (2009:24) which proved that TAs show a greater range of grades than PAs.

The comparison between mean grades in TAs and PAs for the three sets of criteria shows that the most significant grade difference is for set C (Referencing), and the lowest is for set B (Language). In terms of individual criteria, grades tend to be more similar

when the criterion is more general and refers to the overall judgment of the essay (for example, its structure and readability) or language conventions (e.g. proper use of grammar and spelling), as also indicated by Zhang et al. 2020. On the other hand, the more significant mean grade difference is for the criteria are related to more specific aspects of the essay (e.g. the appropriateness of vocabulary and literature, proper referencing) and/or to the ones that require assessors to perform more cognitively demanding tasks (such as deciding whether the introduction and conclusion draw together relevant information or whether the essay content corresponds to the required essay type). This conclusion is in line with the one made by Falchikov & Goldfinch (2000: 287), who maintain that TAs and PAs "tent to resemble more in the overall judgment of a product or process being assessed, then when they are asked to assess several individual dimensions of the product or process in question".

The Pearson correlation coefficient indicated low positive correlation between the mean grade awarded by teachers and the one awarded by peers for 11 out of 13 criteria for assessment. Even though such results indicate that the method of measuring validity of peer assessment is not completely optimal (as also suggested by Cho et al. 2006: 892), the detected correlation indicates that the use of PA in our EAP course has potential to be used in the future if certain deficiencies are corrected. It is interesting, though, that the highest detected correlation refers the consistent use of a referencing style, having in mind that the mean grade awarded by teachers and peers for this criterion (no. 13) is the highest of all.

5. Conclusion

The present study reports on the use of peer assessment of academic essays as a supplementary activity in an EAP course at a business-oriented university during the school year 2020/21. The paper outlines the assessment procedure and reports on the correspondence between teachers' and peers' grades on a set of criteria comprising an online assessment form using several statistical measures, with the aim of investigating the potential of PA as a learning tool and a supplementary or substitute assessment tool. We also hoped that the procedure would help us discover the aspects of essay writing the students are weakest at, so these aspects can be addressed in the future iterations of our EAP course.

Based on the comparison between data gained from TA and PA, we can indirectly infer what students' weak points in essay writing and grading are, or what instructions teachers failed to provide prior to or during the essay writing assignment. For example, significant differences between mean grades awarded for the last set of criteria (proper referencing, the choice and the acknowledgement of used sources) may indicate that these aspects of essay writing need to be addressed more thoroughly in future iterations of the course. Secondly, low positive correlation between peers' and teachers' ratings may indicate that students are either insecure about their assessment competencies or they do not understand them completely, which reduces the validity of their assessment and further indicates to deficiencies in the assessment procedure and the preparation of students for their assessment task.

All the above points to limitations that need to be addressed in future iterations of the essay assessment procedure. Even though the procedure itself was carefully planned following the guidelines in Topping (2009: 25), several steps in the procedure need to be improved. Firstly, students were not included in determining criteria for assessment as they were

experienced neither with PA nor with academic essay writing before. Considering low positive correlation between PAs and TAs, we believe that involving students in discussions regarding essay evaluation criteria (as Falchikov 2007: 132-133, suggests) and providing more training (as suggested by Chang et al. 2010) may contribute to better achievement, higher correlation with teachers' grades and higher validity of peer assessment. Particular attention needs to be paid to the criteria which show most significant differences between teacher's and peer's grades, and the ones that have the lowest correlation.

Further research regarding this topic may include measuring the reliability and readdressing the validity of PA by including multiple peer assessors per one essay, as suggested by Cho et al. (2006: 892) and Schunn at al. (2016: 4). In the assessment procedure explained in this paper, reliability was not measured since each essay was assessed by a single peer assessor. In other words, the corrections made in students' essays may have been based on teachers' assessment only because students find the assessment made by their peers unreliable or invalid. Additionally, validity and reliability need to be looked at not only from teachers', but from students' perspective as well, by inviting students to fill in an assessment helpfulness scale, as suggested by Cho et al. (2006: 894).

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