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Developing an ESP-Based Language Learning Environment to Help Students Improve Critical Thinking Skills in Written Output

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Abstract: In recent years, as a result of both research discoveries in the fields of foreign language acquisition and learning, the concept of teaching and learning has undergone a significant transformation. English for Specific Purposes (ESP) is a learner-centered approach to teaching English as a foreign language that emphasizes developing communicative proficiency in niche industries such agronomy, commerce, academia, accountancy, education, engineering, and information technology. This concept of "English-for-Teaching" as a restricted form of ESP for the classroom builds on the knowledge that instructors already have about teaching while also introducing and validating specific classroom terminology. When students interact and cooperate with one another, ESP practice emerges naturally in a language learning setting. Two major aspects that ESP highlights are the growth of dialogical interaction and the establishment of ecologically complete learning environments. In this essay, we create an ESP to aid students in the development of their critical thinking (CT) abilities in written output. We combine the Synergy model, Brain-based learning, and the Flipped Classroom models to create an ESP environment. Students' CT abilities and academic success served as the study's criteria. The Course Satisfaction Questionnaire and placement exams were used to obtain the statistical data. Using the Cronbach Alpha coefficient (CAC) and Spearman correlation coefficient, the test on CT data was interpreted, and the combined data was examined using SPSS (V 26.0). By immersing students in problem-solving-based learning (PBL), this paradigm helps students develop their CT skills. It also helps students achieve academically by elevating their sense of accountability for learning outcomes and promoting the use of a variety of learning strategies.

Keywords: English for Specific Purposes (ESP), critical thinking (CT), ESP-based language learning environment, Flipped classroom model (FC), Brain-based learning (BBL), Synergy model.

1. Introduction

Similar to the situation of Russian language, which was previously the dominant foreign language in Vietnam, English was originally brought to address the growing need for communication with and information from the Western world, particularly in science and technology. Since Vietnam's reform in 1986, and the disintegration of the Soviet Union, English has supplanted Russian language as the de facto foreign language in the country. The country has seen a spike in English language instruction and learning during the previous two decades. As Vietnam integrates into the global economy, residents need to communicate in English not just on a daily basis but also to comprehend specialized content. This requirement necessitates revisiting of English for Specific Purposes (ESP) instruction, which formerly concentrated on expanding learners' technical vocabulary and improving their reading and translation abilities. Approaches such as Content-based instruction, Task-based learning, and Problem-based learning have been implemented in Vietnam as part of the trend toward incorporating communicative parts of English language into ESP courses (Nguyen et al., 2019).

ESP is primarily concerned with teaching specialized languages. It pertains to teaching and learning specific skills and language to the learners for meeting their needs for a specific purpose, in a specific profession or area. In other words, ESP relates to building competencies needed in a specific subject, profession or workplace. It has been widely taught at universities all around the world through courses such as “English for Engineers”, “Aviation English”, “English for Law”, and others since it is recognized as a specialized field of study. ESP has two key goals in English Medium Instruction (EMI) university contexts; providing for the requirements of learners who need English to "study" and

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"work". If these needs remain unfulfilled, it may become a difficult problem to address. Inherently, ESP is a learner-and-learning-focused method. Teaching ESP places a lot of expectations on instructors due to its learner-centered approach. The first of these requirements concerns the knowledge basis that an ESP instructor should have. As previously said, students from a wide range of disciplines study ESP in order to fulfil the needs of their professional prospects in a successful manner. It should be noted that teachers face difficulties as a result of this specialization. ESP is generally taught by a language instructor rather than a specialist in a certain topic. As a consequence of this, instructors of ESP have to be subject matter specialists who are able to coax learners into revealing their own content knowledge. It is important to highlight, however, that since English instructors are not trained to educate students using source material, the job of an ESP teacher becomes far more difficult. Teachers must also be able to deliver topic information to students in the most relevant ways that necessitates the acquisition of pedagogical content knowledge. Pedagogical content knowledge is unique to instructors and relates pedagogical knowledge (what they know about teaching) to subject matter knowledge (what they know about what they teach). Regarding ESP instructors' PCK, ESP teachers have to get better at selecting relevant learning resources, identifying linguistic issues, and providing appropriate feedback on learners' language elements. It is not incorrect to say that ESP instructors are required to perform additional responsibilities that Early Grade Preparation (EGP) instructors are not required to perform. ESP instructors are experts, often acting as needs analyzers, then developing and implementing specialized programmes are specified by Bayram and Canaran, (2020). Education is under ongoing pressure to develop professionals who are able to communicate successfully in a foreign language (mainly English) in their workplaces, which is an absolute component of the present job market. It means that undergraduates must have a basic understanding of general English before moving on to learn ESP language skills in order to fulfil the job market's selection requirements. In general, employers are less inclined to invest in fresh graduates however, on selection they are expected to be ready to enter the professional life equipped with the required job skills (Marcu, 2020). Among these skills, a good grasp on English is given the foremost priority.

Hence, in this article, we have proposed developing an ESP environment to help students develop CT skills in written output. The further portion of the paper is structured as follows: Part II presents the associated literature and the problem statement. The flow of the proposed work is explained in Part III. Part IV examines and compares the proposed method's behavior to that of traditional approaches. Finally, part V brings the paper's overarching theme to a close.

2. Related Work

A number of different authors have proposed a number of different models in relation with ESP-based language learning environment. In this section, the related notable studies are reviewed:

The study conducted by Zhang and Chan (2015) assert that it is vital to engage language specialists, researchers and practitioners in ESP, EMI, CLIL, literacy education, and applied linguistics. ESP, particularly, disciplines the language activities of the specialists who can further participate in communities of practice with highly specialized knowledge, discursive practices, and teaching methodologies. Wang (2015) mentions that the projects like WikiProject Cooperation may be utilized to help ESP students in writing. In this study, the program was used to teach business English to the Taiwanese students. The participants were given two writing exams and a questionnaire. The findings showed that the program was beneficial for the writing students in learning specialized writing. Similarly, Hsiao et al. (2021) found how flipped classroom method affects non-English majors' self-efficacy, study process, and English learning performance. In the same line, Lee and Martin (2020) investigated the flipped classroom from the perspective of teacher trainees in order to analyze which factors hinder or inspire them to use this strategy in their own classrooms. The research performed by Liu (2016) found that constructivism could be used as a theoretical framework in ESP environment with an emphasis on using the new model in practice. The new method is carried out with the use of ESP, MOOCs, and the 'Flipped classroom. Ghomari (2015) found the factors that contribute to the implementation of an effective ICT-based instructional strategy for ESP. The study conducted by Oweis (2018), using trial case study methodology, found how blended learning affected students' motivation to learn English and the relevant performance at the German Jordanian University. Liu (2021) found that flipped classroom in IT English instruction, based on SPOC, was beneficial for improving learner performance. This study examined the current IT English instruction and its issues.

The study by Safdar et al. (2021) found that the guided learners develop a sense of belonging, accountability, responsibility, competition, networking, and problem-solving abilities. Talib and Danial (2018) found that the students of Communication Science majors must be competent in English. Students study English so they can communicate with others. Moreover, students respect speech clarity and pronunciation. Bayram and Canaran, (2020) conducted a research in the foundation university's language department. The sample included non-native ESL teachers, while sequential explanatory mixed-methods design was used. According to the findings, ESP teachers could not interact with lecturers to help students acquire high cognitive abilities. Qasemand Al-maqateri (2018) mention that in their study, the material was acquired via surveys and informal interviews with the instructors of English, Computer Science, and Business

Administration. This data may help understand ESP trainees' perceptions and requirements. The findings showed that a diagnostic approach to ESP-related activities might help instructors detect and concentrate on students' needs. The study conducted by Fox and Artemeva (2017) found that the creation of an ESP-based diagnostic writing assignment and rubric could be used to identify incoming undergraduate engineering students' academic needs, with particular emphasis on the role that disciplinary (engineering) factors played in this process.

In the above light, Rahman et al. (2019) contend that Facebook group may be utilized as an ESL teaching tool. In this setting, student learning is usually goal-oriented and involves media training. Rahman et al. believed that the study would assist English instructors to understand how Facebook groups might help students improve their writing and responding to peers' writing. Cheng (2019) found that the 36 researches show similar themes. The findings of these studies demonstrate that understanding discourse communities, enhancing rhetorical expertise, and emphasizing (sub) disciplinary variety in research writing can train learners. The research conducted by Sangaran (2016) examines how de Bono's Six Hats were included into the ENG1050 curriculum to help students develop their critical and creative thinking abilities, and to help them view things from several perspectives in order to come up with insightful analyses and syntheses. Xu et al.(2020) mention that China's higher education system is now using a "Learning Management System (LMS)" and a "Personal Learning Environment (PLE)" to educate instructors of ESP. The research conducted by Okada (2015) notes that conversation analytic research attempts to provide language instructors insights into the usage of identity. Jiang et al. (2020) conducted semi-structured interviews with six people in order to clarify the idea of the type of institutional assistance that is required. It was found that policy and financial support are the two most important forms of institutional support needed for effective ESP supply. Yang (2016) combined online learning community support and onsite seminars for self-directed English language learning to investigate performance. It was found that in ESP, self-directed learning with limited instructor interaction of merging on-site and online learning communities, might help students to acquire learning autonomy. Tsai (2015) illustrated how ESP courseware for technological sectors could be used in an elective EFL program provided to junior students at an institution in southern Taiwan. McGrath and Kaufhold (2016) mention that the approaches of ESP and Academic Literacies to the instruction of academic writing have been seen as diametrically opposed and philosophically incompatible. The authors suggest that an eclectic approach to teaching writing is needed to better meet students' personal, local, and disciplinary contexts. Tsai (2019) mentions that pupils in an applied foreign languages department at a university of technology were taught English Writing for Business utilizing task-based learning (TBL) and interactive courseware. Students could create and integrate their own cognitive representations by using Mayer's multimedia learning theory, and the interactive courseware is designed with language learning in mind, following Chapelle's proposed criteria for multimedia CALL development. Tatzl (2015) investigated how the case approaches could be creatively adapted for the goal of teaching academic English. It was found that the case approach, which is widely used in topic disciplines, has the ability to provide completely student-centered language education. Tao and Gao (2018) examine how eight ESP professors developed and negotiated their own identities through the use of life-history interview data. The analysis shows that for the research participants, being an ESP instructor is a complicated process of modifying professional practices and establishing professional identities. Khat (2020) investigated how the obstacles and measures were required to be considered in order to construct an ESP course in the field of STEM for academic and industrial stakeholders in Cambodian tertiary institution.

The current study intervenes ESP teaching and learning at the cognitive point. It contends that students' critical thinking abilities are related to their ESP learning, and students can be up skilled by boosting their cognitive abilities. On this account, taking into consideration students' needs for writing skills, an ESP-based environment was built incorporating students' critical thinking.

2.1 Problem statement

The purpose of ESP courses is to provide students with the necessary English language skills for target needs, or situations in which the language will be employed. It is generally acknowledged that the requirements of the learners for learning English should be the deciding factor in any choice made when establishing language instruction programmes in ESP environment. The ESP courses that students are taking are seen by them as excellent preparation for future academic and professional communication. Students demonstrate an understanding of the value of technical communication. Students claim that their English proficiency has increased. Students are aware of the necessity to increase their English proficiency. The reality, on the other hand, is rather different. Problems with the practice of ESP in non-English departments continue to exist, and need to be addressed in the future. Some realities associated with ESP practice, such as lack of knowledge about learners' discipline, lack of teacher training, lack of proper needs analysis, large ESP classes and learners' varying levels of language competence, have, in fact, proven to be the stumbling blocks for the advancement and growth of ESP practice in general, and higher education institutions in particular. The challenges identified and explored in this study should serve as a wake-up call for higher education institutions to discern the need to alter ESP methods.

3. Proposed Methodology

In this section, an ESP environment to develop critical thinking skills, is discussed in detail. Figure 1 depicts the schematic representation of the proposed methodology. The experiment is split into two stages. In first stage, the 1st semester students were asked to follow conventional learning method (control group). In second stage, 2nd semester students were asked to follow ESP based learning method (experimental group). Both groups were asked to fill in a questionnaire. The data collected from the questionnaire, were analyzed in order to determine the Cronbach's Alpha coefficient. Later, the Spearman correlation coefficients of the data was determined.

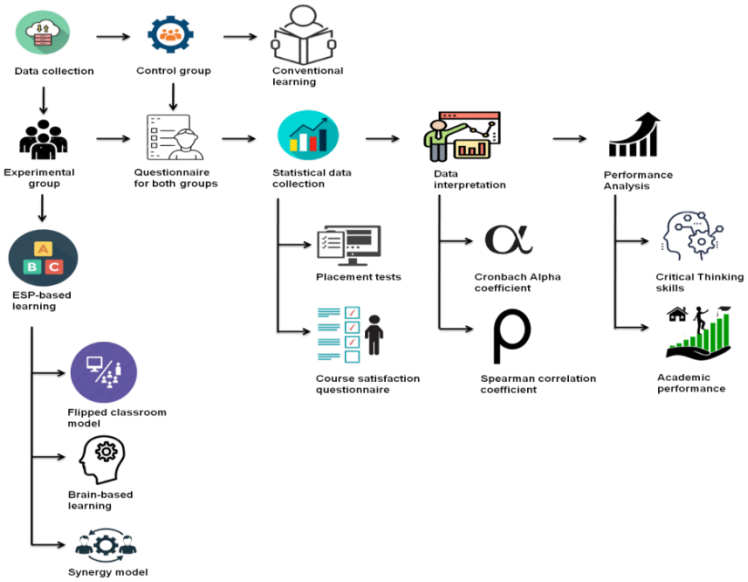

Fig. 1. Schematic Representation of the Suggested Methodology

3.1 Data Collection

The study's main variables were the students' CT abilities and their academic achievement. The experiment included two sub-stages: the first semester of 2018 was based on conventional methods while in the second semester of 2018, was based on ESP learning methods. In other words, students in the EG (experimental group) received both traditional and ESP based learning methods. There were 541 first-year economics pupils, and their pupils/instructors were surveyed. Odesa State University of Internal Affairs, Kyiv National Economic University, named after Vadym Hetman, and Ternopil National Economic University conducted the online questionnaire-based study. Sample Size Online Calculator was used to estimate the population's size to be 87 people (e =.05) with 95% confidence. This number was used to form the experimental group (EG) involving 44 students and control group (CG) of 43 pupils majoring in "Management", "Marketing" and "Theory of Economics". The pupils in the ESP were divided into the groups of the same size, based on their exam scores and needs.

3.2 ESP-Based Learning

ESP is a subset of English as a second or foreign language. It usually focuses on teaching English to people who are already working or need a focus on the lexicon and abilities they require. ESP courses, such as Environmental English, can have a wide-ranging influence despite their seeming narrow emphasis. The most successful teaching strategies to "increase learners' motivation, consequently boosting their academic accomplishment" are those that deal with how students think and feel. The successful learning approaches are the flipped classroom, Brain Based Learning Approach, and Synergy Model.

3.3 Flipped Classroom

One option for teaching in an ESP class is the use of a flipped classroom. The flipped classroom is a cutting-edge method in education that replaces in-class instruction with homework assignments that students do outside the class. Students are expected to watch videos at home and utilize class time to debate, solve difficult problems, and answer questions, all while being encouraged to participate actively in their own education. It is crucial for professors to check whether or not their students have completed their pre-class homework. In today's world, there are a number of free online applications that may be used to test students' comprehension. When students are watching a video, the teacher can include questions, connections to other websites, or even images to collect data. Just a handful of the options are

available to schools to make interactive flipped films include free applications like "Edpuzzle", "Zaption" and "eduCanon," as well as YouTube. Anyone may find tons of video-content online by conducting a keyword search or following a link to the video's title. Students in a flipped classroom use video as their primary source of information. Instead of relying on the teacher's explanation, students now learn by doing and attempting to comprehend the content on their own.

3.4 Brain Based Learning (BBL)

The BBL Approach is based primarily on 12 major brain compatible learning and teaching rules: The brain is a parallel processor; learning engages the entire physiology; the search for meaning is innate; the search for meaning occurs through patterning; emotions are critical to patterning; the brain processes parts and wholes simultaneously; learning involves both focused attention and peripheral perception, and learning always involves conscious and unconscious learning. Active processing, coordinated immersion, and awareness are involved in this method. It is a teaching strategy, which is centered on three instructional techniques namely “Relaxed Alertness”, “Orchestrated Immersion”, “Active Processing”.

3.5 Relaxed Alertness

In order to foster the best environment for learning, creating a relaxed teaching and learning atmosphere is essential. Effective learning can take place in a pleasant yet demanding instructional setting with few dangers. Studying is enhanced when students are interested in what they are learning, and their brains are calm. Teachers should try their hardest to remove anxiety from the classroom.

3.6 Orchestrated Immersion

Students need to focus on the material they are being taught in order for it to become an effective teaching strategy. Students must also rely on their long-term memory when delving into knowledge that has a holistic and correlative feel.

3.7 Active Processing

Memory practice that connects new concepts to ones already in the brain helps students learn meaningfully, especially for those with active brains. As a result, teachers should enable students to actively analyze and integrate knowledge.

Inconsistent learning environments are created by confining students' experiences to more left hemispheric tasks, such as repetitive teaching targeted to facts and details, sequential ordering, lecture/discussions, drill and practice, and textbook reading. Consequently, learner-centered classrooms are an effort to help students relate their prior knowledge to their current academic assignments. By concentrating on how the brain works, we may better understand sensory perception, attention, memory, and how our emotions influence our ability to learn more effectively. Teachers who are more left-brain dominant use organized lectures and prefer offering written assignments and activities rather than those that are presented or drawn. Teachers who are more right-brain dominant need different teaching methods. Teachers, on the other hand, tend to lecture less to right-brain dominant students, preferring to engage them in hands-on learning activities instead. Both the left and right brains are equally well-balanced in the middle-brain dominant individuals.

3.8 Synergy Model

With the help of the synergy model, a better understanding of the current status of applied college ESP and its development strategy is possible allowing for a more accurate assessment of the current situation in both the university and outside world. This allows for a more accurate assessment of the current status of applied college ESP and its development strategy. There is a discussion of the teaching strategy, technique, and mode. Synergy between the teaching system's internal components is emphasized, resulting in a coordinated, synchronous, and complementary interaction and an overall synergistic impact of teaching and a more ordered growth of the system. The cognitive processing system in teaching can also be used by students to interact with the curriculum and instruction. A professional learning environment provides students with a wide range of stimuli from which they may choose and adapt their study programmes, and develop their own learning systems. Teaching systems evolve and grow through feedback, which serves as a critical link in a self-organizing virtuous loop and as a guarantee of system self-preservation. Providing timely and rapid feedback, as well as encouraging and promoting good attitudes and behaviours in the classroom, can help to mainstream the practice and create synergy. This is known as positive feedback.

3.9 Questionnaire

Question-guidelines were provided to students in both the CG and the EG. Writing, grammar, and vocabulary were assessed by the academic professionals. It is necessary to administer the Vocabulary Sized Placement Test in order to determine the participants' vocabularies' levels. The writing test focused on the clarity, registers, and structure of the written material. The first section of the exam was a vocabulary test to see how well prepared the candidates were. The participants were questioned whether 75 words were shown as real or not real words to determine. The writing portion

of the test was based on the student's own self-assessment. 'On the vocabulary test, some students performed better than others. There were three sections of the written exam: vocabulary, grammar and punctuation. According to the "Common European Framework of Reference (CEFR)", there are distinct competency levels for language skills. In-depth descriptions of each level are provided. They are C2, C1, B2, B1, A2, and A1. It has described all the levels in detail. It is worth-noting that in terms of proficiency, B2 and B1 are considered to be the highest and lowest levels, respectively, while A2 and A1 are considered to be the higher and basic users. Noun, Pronoun, Adjective, Verb, Numeral, Adverb and other forms were evaluated in the second aspect of grammar. For this reason, there were more questions about grammar and syntax than punctuation marks in the exam. Due to its ease of usage, the participants were well-versed in the use of adjectives and adverbs. It was simple for the participants to answer questions based on nouns and pronouns since everyone had an excellent command of the English language. The following are the questions that the students were required to respond to.

1. Give a brief description of the individuals' you would like to introduce to your group.

2. What is their specialization area? What did they do to advance their profession?

3. Compile a list of their career advice. What does make their advice so useful for you?

Model-related language abilities were projected to improve in the EG pupils. The students were also tasked with demonstrating an enhanced ability to search the Internet for relevant information; to analyze and understand data, reflect, evaluate, solve problems, and make decisions in a timely manner (time reaction). Students learn how to conduct independent research and develop the skills necessary to select relevant information, compare information from various sources, weed out irrelevant data, analyze a problem from multiple perspectives, establish causal relationships, organize and summarize data, draw interference, and articulate their views on the problem.

It was concluded from the findings that students in both experimental (EG) and control (CG) groups lacked critical thinking growth, even though no differences were identified between the two groups. Seminars and master courses held by foreign language teachers for specialised reasons were the first educational condition to be introduced. The participants learned about the criteria and indications of critical thinking as well as strategies for helping students improve their own critical thinking skills. Regarding teaching critical thinking, a seminar on "CT in ESP Teaching" was organized to help teachers better understand and implement critical thinking principles in their classrooms. Assessing and self-evaluation papers were completed by the teachers of "Foreign Language for Specific Purposes" in order to know their pedagogical experience and preparation to construct a second language environment to foster CT in pupils to be summarized. When teaching "Foreign Language for Specific Purposes", the second pedagogical criterion was adopted. Considerable care was needed in selecting texts and teaching aids that would be acceptable for this course. Students' CT skills were honed while completing the "Starting Up" activity, which was designed to help students connect new information to their own personal experiences and existing knowledge, and to discover gaps in their knowledge and understanding. The following is an example of a task from the "Careers" section:

3.10 How would you respond to these questions?

1. What level of ambition do you have?

2. Do you have a vision for your future? When you look ten years ahead, where do you want to be?

The Case Study approach was used to solve a specific problem at the end of each section. For students to develop the skills necessary for constructing and summarizing information (argumentative criteria), demonstrating their impartiality of judgment (affective test), formulating and justifying interference, and synthesizing their behavior toward the problem, these activities must be fulfilled (reflexive criterion). Using charts and the SWOT analysis, the third pedagogical condition was adopted to continuously check the process quality of developing pupils CT when instructing "Foreign Language for Specific Purposes." The efficiency of the foreign language environment in developing students' critical thinking, was evaluated at the conclusion of the educational experiment.

3.11 Data Interpretation

A Statistical Package for the Social Sciences (SPSS) analysis was used to examine whether or not the data received from various sources were similar and credible. CAC were used to calculate the dependability of internal consistency in the data. CAC must be at least 0.60 for results to be considered credible, according to the hypothesis. According to Table 1, Cronbach's Alpha coefficient values range from 0.65 to 0.93 in this case, indicating that the data acquired are trustworthy. Non-parametric Spearman correlation coefficients (SCC) were also calculated using SPSS for each survey statement and a set of respondent categories. Table 1 depicts the questionnaire responses of the students from both groups.

Table 1: Responses of students from CG and EG to the questionnaire

Statement	High %		Low %	
	CG	EG	CG	EG
What level of ambition do you have?	89	95	11	5
Do you have a vision for your future? When you look ahead ten years, where do you want to be?	73	88	15	12

Spearman correlation values typically range from -1.00 to +1.00. Direct interactions are shown by positive coefficients, whereas inverse correlations are indicated by negative coefficients. The stronger the association, the higher the coefficient, positive or negative, therefore a correlation close to one, positive or negative, suggests a very strong relationship, while coefficients around 0 indicate extremely weak relationships. When attempting to interpret the link between two groups, the statistical significance of the correlation coefficients is critical. A value of at least 0.05 indicates that the link is not likely to be the result of chance. Even if the correlation coefficient is near to +1.00 or -1.00, the probability of a meaningful association between two groups is fewer than 95% and, thus, the relationship is more likely to be attributable to chance than a statistically significant correlation.

4 Result and Discussion

Students in the control and experimental groups were compared. There were tests at the completion of the semester. Overall, students' grades have been within the range of 8 to 10, on a ten-point scale, which is commendable. However, statistical processing with SPSS is the most reliable method for comparing the grades of the two groups. Cronbach's Alpha values were calculated to see if the data were trustworthy. For a second step, the significance of any link between the variables was determined using Spearman correlation coefficients.

Table 2 shows that the Cronbach's Alpha coefficients are around.08, (i.e.,> 0.6), demonstrating the validity of the findings. For the first two statements, the Spearman correlation coefficient is 0.947 and 0.996, and the correlations are statistically significant at the 0.05 level (2-tailed). Students' academic achievement, critical thinking abilities, and perceptions of the model improved as a consequence of the experiment. Table 2 compares the pre- and post-experiment mean scores on academic performance and a critical thinking assessment to show how the experiment affected the students' learning outcomes. Table 2 shows that students in the experimental group outperformed those in the control group in terms of academic achievement and critical thinking abilities. The percentage level of student's CT skill before and after ESP-based learning process is presented in figure 2.

Table 2: Learners' mean values

Group	Critical thinking skills		Academic performance	
	Before	After	Before	After
Experimental group (44)	8.70	9.12	75.85	77.24
Control group (43)	9.10	9.34	76.31	77.43

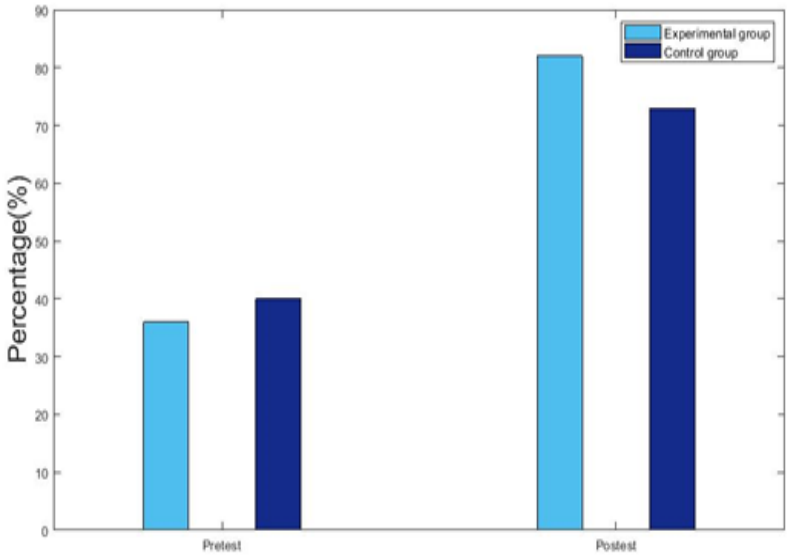

Fig. 2: The percentage of the students' critical thinking skills

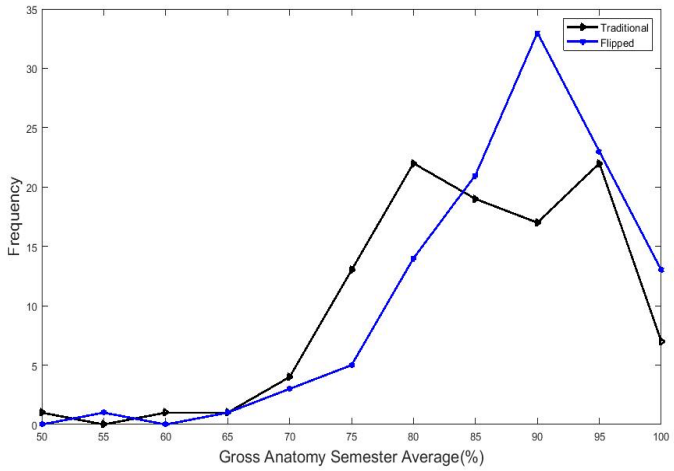

Fig. 3: Semester average outcomes in flipped classroom vs traditional method

Flipped classroom students' semester average (percentage) was much greater than those students in regular classrooms.

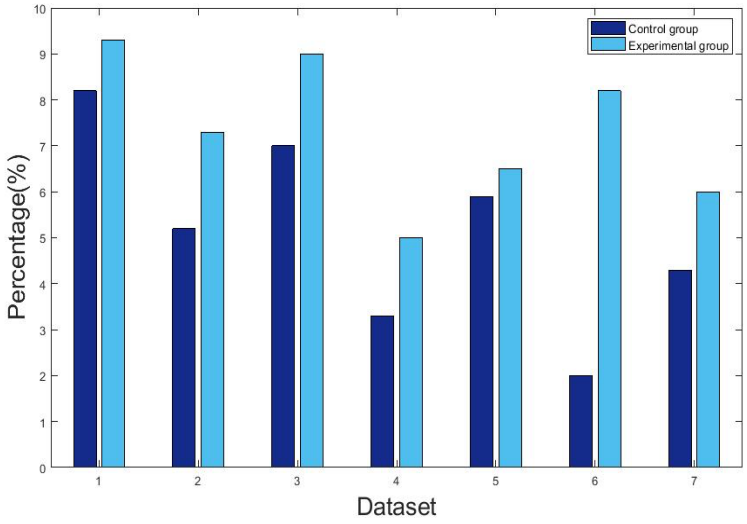

Fig. 4: Results of critical thinking skills in brain-based learning method

Using the brain-based learning technique, the test results of critical thinking abilities experimental and control groups are shown in Figure 4. Students in the experimental group had better critical thinking abilities, according to the results.

5 Conclusion

An ESP is an inevitable trend in English Language Teaching, and is currently an essential component of tertiary education foreign language programmes. Rather than focusing on academic success or language competency, this study aimed to assist language learners to improve their critical thinking abilities. What students can accomplish and what they can learn are the primary considerations in teaching and learning in the classroom. ESP-based language learning method use was associated with increases in EG students' critical thinking, which was measured in terms of emotive, argumentative, and reflective components. The study reveals that the ESP-based learning approach had a direct impact on the academic achievement of the students in the EG. Students that took part in the survey had a favourable impression of the teaching strategy.

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

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