ESP CREATIVE WRITING FROM ENGINEERING STUDENTS’ PERSPECTIVES: A CASE STUDY

Ali Ata Alkhaldi1,2
Emsal Ates
Ozdemir
Rashad Faleh Alhasan3

1,2 American University of the Middle East, Kuwait.
1 Email: Ali.Al-Khalidi@aum.edu.kw
2 Email: Emsal_Ates@aum.edu.kw
3 Saif bin Zaid Academy for Police Science and Security, United Arab Emirates.
3 Email: rashad_faleh@ahsgs.uum.edu.my

(1 Corresponding author)

ABSTRACT

Creative Writing (CW) is an important skill that helps students achieve progress in learning English as a Foreign Language (FL). It also helps them improve fluency, motivation, confidence, and creativity. However, most English for Specific Purposes (ESP) courses focus on technical English, and CW is under-utilized as a skill to practise. As a result, this study examines university students’ perceptions of ESP CW to improve the learning process and enhance its quality. This study used a qualitative research method and interviewed twenty engineering students from Abu Dhabi. The findings demonstrated that creativity needs to be developed in ESP courses by reading and writing, while extracurricular linguistic activities should also be considered to promote CW. In addition, students also need to be well motivated and should think in a FL when they practise the writing process. They need to be encouraged to think creatively in a logical way rather than relying on memorization. Finally, this study recommends developing CW activities in ESP courses and encouraging students to practise CW inside and outside the classroom to improve the quality of FL learning and creativity for lifelong academic and employment purposes.

Contribution/ Originality: This study contributes significantly in enriching the field of English language by providing useful insights about ESP CW. This will help the FL instructors improve their quality of teaching and enhance the language learning process of ESP courses.

1. INTRODUCTION

Writing is not easy for Foreign Language (FL) learners (Nunan, 1999) as they complain about mastering this skill, especially in a FL learning environment (Alkhaldi, 2019). Learners who study at a university consider academic writing to be a complicated process as they must take issues about academic conventions and ethics into consideration. A further possible reason is that they view writing as a spontaneous task (Montaner-Villalba, 2021). Some learners who study English for Specific Purposes (ESP) may have additional language difficulties, such as coherence, summarizing, paraphrasing, and using appropriate lexical items (Kotamjani, Abd Samad, & Fahimirad, 2018) compared to students who take general language courses (Montaner-Villalba, 2021). There are other possible reasons, such as a poor environment for learning the FL, lack of learners’ interests, and commercial textbooks which may not address writing properly.
Many useful methods and techniques, however, have been developed by researchers to help learners master writing skills effectively and creatively (Seow, 2002). Developing writing skills not only helps learners improve their language abilities, but also improves their critical thinking skills such as summarizing, evaluating, and analyzing (Rao, 2007) and creative thinking skills (Wang, 2012). Therefore, more consideration needs to be given to the development of CW in the teaching and learning of a FL.

CW activities are included in language textbooks. However, ESP students consider it very difficult to master since CW is not part of their curriculum even though English is the medium of instruction. Therefore, the researchers of this study analyzed the ESP students’ perceptions as an attempt to ascertain their CW abilities since CW may not be their priority. Based on the ESP students’ perceptions, this study aimed to examine university students’ perceptions of ESP CW to improve the learning process and enhance its quality. The study also aimed to find out ways how creativity can be developed in ESP courses, and whether reading and writing and extracurricular linguistic activities could promote CW among the university students.

CW is very important for developing students’ creative thinking skills and learning competencies for lifelong learning purposes, so there is a need to investigate the students’ perceptions of ESP CW. There is also a need to elaborate the importance of creativity, CW characteristics, the relationship between CW and ESP courses, and the importance of learner motivation for engaging in creativity and CW.

1.1. Rationale of the Study

CW in FL learning is emphasized (Lutzker, 2015), but it is not utilized in ESP courses (Alkhaldi, 2019). Based on the researchers’ best knowledge and experience, ESP courses lack CW activities despite its importance for language learning and creativity for the students who study different specializations at university. The students struggle to follow their core courses which are delivered in English as they cannot express their ideas in the FL easily. They also take compulsory or elective ESP courses focusing on technical writing to graduate successfully, and this is considered part of their bachelor’s plan for graduation. However, CW is not practiced in their ESP courses.

Some engineering students, for example, struggle in CW in English as a FL (Alkhaldi & Benaggoun, 2015) due to the negligence of this skill in the ESP courses. The possible reason for this negligence is due to the common belief of instructors and concerned departments that the students who study ESP courses need to focus on technical writing rather than CW. The focus on technical writing should not contradict that of CW since both complement each other towards developing students’ critical thinking and creativity, which are needed for academic and employment purposes.

Students who study different majors at university and take ESP courses as part of the requirements for their undergraduate degrees can be trained to develop their CW in a FL environment if they are provided with opportunities and the appropriate environment for creative learning (Alkhaldi, 2019). Learners can develop their linguistic competencies, creative thinking, and confidence, provided CW is integrated with the ESP courses at the universities. The significance of CW lies in the fact that it can also improve the learners’ expository writing and factual writing (Maley, 2015). This study makes a significant contribution to the ESP literature because it investigates ESP students’ perceptions about CW in their ESP courses and provides recommendations for improving the skills of CW.

1.2. Purpose of the Study

This study aimed to investigate the ESP students’ perceptions of ESP CW, and to find out how it can help instructors and material developers to develop CW activities in their ESP courses. Furthermore, this study aimed to raise instructors’, students’, and material writers’ awareness about the importance of CW in ESP courses.
Besides, this study also tried to answer the following research question: “To what extent do ESP courses help the students develop their CW skill?”

2. LITERATURE REVIEW

Writing is difficult for FL learners, but it is an essential language skill (Nunan, 1999) which should be practiced and developed effectively (Colyar, 2009). To master all language skills properly, researchers and textbook writers provide the teacher and learners with well-written materials, taking into account all the new developments that are related to English language learning (Alkhaldi, 2014; Seow, 2002; Tomlinson, 2015). In other words, writing is an important skill that is needed for academic, and employment purposes. Academic writing, technical writing, and CW complement each other in ESP, and the latter is an important skill that needs to be developed at university as technical writing has the largest consideration in ESP courses.

Writing in FL is significant for improving creative and critical thinking skills. It promotes learners’ thinking skills to use the language creatively, to express and organize their thoughts, and improve their critical thinking skills (Rao, 2007). Hence, writing has a positive impact on the development of learners’ creativity and critical thinking. Maley (2015) differentiates between CW and expository writing; CW is artistic, and it helps the learners to show their emotions and express their thoughts; however, expository writing is based on conventions and standardized rules. As a result, instructors who teach ESP courses may prefer to deal with expository writing rather than CW. There are several reasons for this such as lack of awareness about the benefits of CW, the possible difficulty of teaching creative activities, and the difficulty of assessing the creative tasks; while students who study ESP courses believe that there is no need for CW in technical courses which shows lack of awareness about the benefits of CW in short and long term. There are also other possible reasons for prioritizing technical writing over CW such as, some universities, impose restrictions on their bachelors’ plans giving priority to technical writing in ESP courses, and some instructors do not have experience in teaching and evaluating CW (Alkhaldi, 2019).

2.1. Creativity

Creativity is useful for students and instructors to deal with continuous world changes and to improve the quality of learning (Maley, 2015). It is the process of ‘thinking outside the box’, and generating new ideas (Read, 2015). When learners create new things, they develop their creativity (Maley, 2015). Creativity requires deep knowledge to produce solution paths, new connections, and forms of expressions (Pugliese, 2012). In a collaborative work published in 2015 by Tomlinson et al. (2015) creativity has been defined from linguists’ perspectives: it explains that creativity is creating something unique or something new which is created for the first time. Maley (2015) discusses that creativity in the language is part of the learning process and maintains that learners practice creativity when they learn a language, such as producing new utterances, writing stories, or telling a story.

Papalazarou (2015) argues that creativity has an important role in culture and societal development; therefore, it should be incorporated into the process of language teaching and learning. Alkhaldi (2019) maintains that creativity helps students to develop their thinking skills and language skills, creating new and different things which stimulate their creativity and motivate them to stretch their imaginative thinking. In other words, creativity is the process of creating new things, ideas, and solutions which may not necessarily have existed before. Integrating CW activities in the ESP courses can help students to be creative and create new solutions to the problems that they may encounter in their other core program courses or in their future careers.

2.2. Creative Writing

CW is a needed skill in ESP courses for lifelong purposes (Alkhaldi, 2019). Telling or writing stories are the most common activities of CW, and they are essential for shaping the young learners’ imaginative lives that can help them develop their creativity in the long run (Lutzker, 2015). Writing stories has a critical impact on effective
language learning (Wright, 2015). To develop learners’ fluency and confidence in writing or telling stories, the activities should be practical and interesting; as a result, they will improve their creative and communicative writing skills (Heathfield, 2015). This shows that CW can help learners to improve their imagination and creativity. Hanci-Azizoglu (2018) concluded that CW increased her motivation and confidence to write in an advanced and complex style through creating new solutions in the target language, discovering new lexical items, and expressing herself meaningfully.

CW plays a significant role in ESP courses which helps students to develop their creativity, fluency, and confidence which can be reflected positively in other core courses in their programs. However, the research about CW in ESP courses is not sufficient (Alkhaldi, 2019) so there is a need to elaborate the relationship between CW and ESP.

2.3. CW and ESP Courses

CW has not been considered well in ESP courses apart from a few publications and conferences (Alkhaldi, 2019; Alkhaldi & Benaggoun, 2015; Moran, 2008). Engineering students, for example, are generally very good in reading and writing fiction in a FL; however, it is not taken into consideration in ESP courses (Moran, 2008). The engineers usually do well in their core courses, and they create solutions to engineering problems. They can also be creative in writing in their ESP courses. Moreover, they can engineer their lexical items when they create their short stories, and they can be creative writers (Alkhaldi, 2019). However, Alkhaldi and Benaggoun (2015) revealed that ESP students did not study CW during their studies or when enrolled in ESP courses. This could be attributed to a lack of interest or exclusion of CW courses from the ESP curriculum, which is the case in many situations.

Cushman (2015) argues that technicians and engineers are creative. Firstly, they are creative when they fix technical issues and find creative solutions for the problems that they encounter at work. Secondly, they are creative when they write creatively since fixing technical problems and writing creatively intertwine. CW should also constitute as a main component of ESP courses supporting all programs. Nevertheless, there are possible challenges for including CW activities in the ESP courses. Alkhaldi (2019) for example, summarizes possible challenges based on the related literature, such as standardization of exams at universities limits ESP CW, the given time to teach specific chapters in each course is not sufficient to practice CW, and students are not given opportunities to be motivated towards development of their CW. Such challenges can be rethought when materials writers or developers design ESP courses.

2.4. Learner Creativity and Motivation

Creativity is related to creating new products and to the process of creativity itself (Papalazarou, 2015) as discussed earlier. Learners can develop their creativity, especially the skill of CW, while they study ESP courses and have more interesting, creative practices. This can be achieved with the help of material writers and instructors. The learners’ creative abilities should be well-developed whether they learn inside or outside the classroom (Rosenberg, 2015). The learners need to be encouraged and trained well to be proactive and creative in ESP courses.

Motivation is a key factor for writing creatively, and the learners should be well-motivated to achieve progress and develop their creativity. Furthermore, to produce new forms and solutions, the teachers need to have knowledge and teach in an interesting way (Pugliese, 2012). Promoting creativity in a classroom will increase the engagement of the learners and help them learn the language, and make language learning memorable and enjoyable (Read, 2015). Moreover, CW can intrinsically motivate the learners to be engaged in the learning process through playfulness (Lutzker, 2015). To develop CW, the activities should be challenging, motivating, and interesting.
Arnold indicates that learners can learn effectively and creatively in an emotionally active environment (in Tomlinson et al., 2015). Motivation is necessary to encourage the learners to learn effectively and creatively, especially learning a FL. The positive interactive environment will help learners to be creative in learning the language, and textbook writers have a positive role in incorporating in their textbooks activities for promoting creativity (Alkhaldi, 2014; Tomlinson, 2015).

The literature review shows that there is a lack of published research about CW in ESP courses. This study enriches the related literature and investigates the importance of CW in ESP courses. Specifically, it examines the ESP students’ perceptions about creativity, CW, and motivation to enhance the learning quality of ESP CW.

3. METHODOLOGY

This section discusses the research method used in this study, the sample, the research instrument, data collection, and data analysis.

3.1. Research Method

A qualitative research method was used in this study. The researchers designed a semi-structured interview for interviewing students from Abu Dhabi Polytechnic in the United Arab Emirates. Abu Dhabi Polytechnic is a university college offering higher diploma and bachelor programs in a variety of specializations in engineering such as Electro-Mechanical Engineering, Petroleum Engineering, Aircraft Engineering amongst other subjects. All students are Emiratis, and all of them must take ESP courses as a requirement for completing their bachelors and obtaining the degree.

3.2. Sample of the Study

The research sample consisted of twenty students, aged 18-20 years old, who were studying ESP courses. The participants were divided into two focus groups; Group 1 consisted of twelve students (seven males and five females), and Group 2 consisted of eight students (six males and two females).

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The researchers interviewed the first group and obtained qualitative information. Afterwards, they interviewed the second group to obtain further in-depth information and to validate the obtained information. Students voluntarily participated in the interviews. The researchers selected the participants who expressed their interests to provide qualitative data as recommended by research methods in applied linguistics (Dörnyei, 2007). Table 1 presents the coding process adopted to identify the participants.

The coding process provided codes to all participants, “M” for male and “F” for female, preceded by their Group number 1 or 2 and followed by their serial number, 1, 2, 3, and so on. This process was adopted to ensure the anonymity of the participants and to follow the ethical research standards.

3.3. Research Instrument
The researchers prepared a semi-structured interview based on related literature. The interview questions covered: students’ language learning process from their own experience, the meaning of creativity from their perspectives, and the creative thinking and use of the FL. The researchers also tried to elicit answers about the importance of CW in their programs, their revising and editing process, their motivation for writing in the FL, and their suggestions to improve CW in ESP FL.

3.4. Data Collection
The researchers secured the required consent from the management of Abu Dhabi Polytechnic and participating students. The interviews were conducted in English and in person using a digital recorder. A lot of information about language learning, creativity, and CW was collected and saved in a secure laptop for analysis purposes. It is worth mentioning that the names of the participants were anonymous during the interviews for ethical research reasons.

3.5. Data Analysis
The collected data of the interviews was transcribed and stored in MS-word documents for analysis purposes. Afterwards, the researchers coded the data to generate themes inductively from specific to general as recommended (Creswell, 2009; Dörnyei, 2007). A thematic analysis was conducted to create themes and establish a coherent overview of the whole scenario.

4. FINDINGS AND DISCUSSION
This section discusses the findings of this study based on the collected data to enhance the quality of ESP CW, to help the students achieve effective learning, and to develop their creativity. After analyzing and coding the data, the following themes emerged:

• Creativity in ESP courses needs to be developed by reading and writing
Some students believed that writing was not given much attention in their courses. 2M4 said, “most of the time … you’ll not be asked to write an essay or … short story or something. You'll be asked to write … a report.” 2M4 indicated that the instructors and curriculum did not help him to practice CW:

“The learning process from grade one until you graduate from college, you'll be just learning, you'll just sit on … chair and you will learn. It's like they will give you the knowledge, but after you graduate you will have the time to think about what you learned, about how to prove it, but while studying, you'll never have the time.”

This shows that neither academic writing nor creative writing was given a priority in the ESP.

Creativity, however, can be promoted if the students are asked to read and write in the FL, especially fiction or any creative piece of writing. For example, 1F1 indicated that reading is a key skill, and students have to read “different types for example science articles or uh stories, novels whatever you have to read a lot… Cuz you can
figure {out} … tricks, the tricks in … in writing skills.” 1F1 thinks that writing is a tricky skill that requires a lot of reading. 1M2 indicated that reading is important for language learning for expanding their imagination because there is a positive relationship between reading and CW as indicated by Maley (2012); Maley (2013).

2M3 highlighted the importance of reading in the FL for promoting language learning (such as vocabulary learning) and creativity in a FL, “read articles from … scholarly articles cuz its more efficient than other articles and try to write every day.” 2F1 agreed with the other students indicating that “creativity in English depends on the vocabulary that you use and how can you give the … reader an idea about what you're talking in a different way.” Reading and writing can develop learners’ lexical abilities and utter new items or ideas creatively. Moreover, reading continuously promotes CW and creativity as suggested by Wang (2012). As a result, reading and writing for creative purposes need to be enhanced in ESP courses for better quality of teaching and learning English as a FL.

1F3 highlighted the importance of reading, but she revealed a problematic issue with learning lexical items in the FL saying:

“When I mention that reading is the best way to improve uh writing skills, I think m there is some uh student who don't like reading, why cuz … when they reading they found some words they don't know the meaning so they feel lazy to find out what's the meaning, so they just ignore reading.”

This means that there is a need to develop students learning abilities and promote reading and writing for creative linguistic uses.

- **Extracurricular linguistic-related activities can promote CW and creativity**

Students believe that extracurricular linguistic-related activities or tasks can promote CW and creativity. 2M3, for example, did not believe in the role of schools and colleges in developing students’ creativity saying, “Usually in like high school or college, you-your given certain topics which refrains you from being creative and certain aspects, that’s why you might not see that much creativity in high school or college unlike in work fields.” This required a deeper evaluation of their responses to be reflected in the ESP courses, especially extracurricular activities.

Some students also explained that watching movies in English can help them to increase their imagination and think differently. For example, 1M1 believed that watching movies helped him to have new, interesting ideas, and expand his imagination. He said, “movies … open my mind to new ideas.” When he was asked about the type of movies that helped him to improve his English and expand his imagination, he responded, “the movie that I watch that's that affects my English is mostly documentaries.” 2M1 said, “we practise it {creativity}… with playing games, videos.” Watching movies, playing video games, and practising other related tasks should be encouraged inside and outside the classroom to motivate students to develop their creativity. Furthermore, 1F4 said:

“Yeah, not all of them… maybe they need to encourage themselves {students} … how to be … creative thinkers and how to write … creatively... I suggest … start establishing workshops or centres that help students to improve their writing skills... They have to use different ways for example … encourage them to participate in … some events.”

Active participation in academic, creative events such as ESP CW competitions or story telling competitions in the FL may also develop students’ confidence, increase their motivation, and promote their creativity.

2M2 believed in the role of English schools that have native speakers in improving English and creativity. He argued that “I joined an English-speaking school uh then I’ve come--I’ve came here in ATHS {Applied Technology High Schools in Abu Dhabi, United Arab Emirates} and also, I went to several internships, so that's why I improved my English, even my accent.” 2M1 also suggested having interviews for practising creativity saying, “I suggest more interviews, um more of a social conversations and um just more less more talking in English,” while 2M2 suggested joining English clubs. This confirms the positive impact of including a useful variety of interesting
extracurricular activities in meeting many students’ needs and interests and developing their confidence, motivation, and fluency in ESP courses towards creative use of the FL.

- **FL should be encouraged to be used in the thinking process**

  Some FL learners prefer to use their first language in the creative thinking process. This may hinder their fluency and decrease their confidence. The students indicated that they preferred using their mother tongue to think, brainstorm, and organise their thoughts. Then they translate their thoughts into the FL. 1F1 uses her first language in the thinking process. 1M2 and 2M1 also agreed with this idea. 2M1 and 2M3 also advocated thinking in Arabic and translating thoughts into English. 2M3, for example, said that it “depends on how you’re thinking. Some people are better in Arabic, so if you’re good in Arabic it’s better that you think in Arabic so that … you know you can later on change it to English.” However, 2F2 and 2M4 disagreed. 2M4, for example, said: “That not all the vocabulary that you find in Arabic you can translate it to English, cuz Arabic is unique that it has so many words and vocab that it’s a little bit hard to translate it to English. That why sometimes I prefer to think in English and write in English. cuz for me it’s harder to translate the Arabic words, like some rare Arabic words to English. It’s impossible for me.”

  Moreover, the students who studied in an English-speaking country prefer to think in the FL. 1M1, studied for a few years in Canada revealed that he used English in thinking and writing. Studying abroad helped him to think and write in English and this even reflected in his use of the language. In fact, not all students can have the opportunity to study abroad, but if the students are encouraged to think in the FL, to read critically, and write creatively, they will achieve high progress in CW, develop their personality, and improve their fluency.

- **Motivation can effectively develop CW**.

  Motivation is a key factor in stimulating students to learn the FL and develop their CW abilities. Therefore, the participants expressed their lack of interest in CW due to a lack of motivation in FL. Student 1M1 and 1M2 insisted on the role of motivation to study in English. 1M2, for example, said, “Sometimes I just write stories ideas. Sometimes. Just for myself..... It’s all about like imaginary stories... Like related to space, related to cars, related—sometimes I write cars parts… sometimes in Arabic language.” 2M4 indicated that grades play an important role in stimulating him to develop his CW:

  “To be honest, what inspires me the most are the marks. Especially in college it must be the marks, cuz if I wrote a novel, … I will write it outside, I will write for myself, but like in school and in college, you’ll write it for the teacher, not for yourself.”

  This shows that motivation in CW is necessary in developing CW skill. Student 2F1 was fearful of mistakes, so she tried to avoid thinking or writing in the FL, "I think one of the obstacles to be creative is fear. They are some people are scared to go think out of out of the box and stay out of the box. As they said, follow the book, only following the book, they won't be uh different than others." This may show that the student is not well-motivated, and she does not have confidence to write creatively in the FL.

  CW in ESP courses should be included, and the students should be encouraged to increase their confidence and to think and write creatively in the target language. CW is a motivational experience to Emirati students (Dougherty, 2010). Ellis (1994) insists on the importance of motivation in developing learners’ CW. It is important in developing learners’ self-esteem and self-confidence among learners, and this will help them in increasing their motivation and achieving effective language learning (Dörnyei, 2009; Maley, 2012; Maley, 2013). Motivation is essential to practise and develop CW, and if there is no motivation, there will be no effective learning. Therefore, students who study ESP should be motivated well to be engaged in CW.

- **Memorization is preferred to creative thinking**

  Memorization is preferred or used rather than creative thinking in the process of FL learning. Students focus on memorization even in their core courses. 1F1, 2M3, and 1F2 indicated that students focused on memorization for learning rather than creativity. 1F1, for example, said that she did not practise writing in her core courses since
she “found all of them depend on memorizing.” Student 2M3 also said “This is not an arts school, so you can't think uh overly, you … memorize.” Their responses reveal that even in the core courses, the students memorize the topics and rules rather than thinking creatively. It seems that students may be trained to memorize rather than to think creatively. Memorization may lead the learners to be disenchanted with creativity and language learning (Maley, 2012; Maley, 2013).

2M4 discussed an important issue which is related to exams: “I think huge a reason of why we don't think creative in this university or maybe in other universities is because … quizzes …That's why you must follow the schedule, if they could organise the timeline that we have less quizzes to that uh like not each day a quiz like Sunday a quiz, Monday a quiz.” The students may temporarily be trained on how to memorize the topics that they need to pass the exams, then they 'switch off' (Alkhaldi & Benaggoun, 2015). The reason for this is that they are overwhelmed with exams and quizzes, and this is one of the possible challenges that CW in ESP courses faces.

2M4 added:

“This is not like English literature, diploma or al bachelor, this is engineering. You can't be creative; you can't change the math rules. Most of what we study is math, physics, chemistry. You can't be creative in those. It's either you invent something new or that's it, follow the book.”

2M3 also indicated that nobody wants “to take the chance of doing something else other than the book and might get it wrong.” This stereotype shows that there is a lack of awareness about creativity and its positive impact on their core courses.

The instructors and textbook writers of ESP courses should take this part into account and encourage creative thinking and CW in the courses. In other words, they should aim to show students how creativity impacts their thinking about science. It is not only the responsibility of instructors and textbook writers to design appropriate ESP courses that enhance creativity and CW, but also the responsibility of the academic decision makers in the concerned colleges and departments to develop their bachelors’ plans and include ESP CW in their curriculum.

- **Revising process focuses on sentence skills and lacks the focus on coherence**

CW helps the students to develop their FL at all levels (Maley, 2015) but the students possibly concentrate on sentence skills such as spelling and grammar when they revise and edit their writing rather than focusing on logical organization of ideas and coherence. For example, 1F1 said that she “starts finding if there is like misunderstanding words or grammar mistakes, spelling mistake.”

2M1 also said, “Maybe checking, check it … grammar, vocab, but evaluation it depends on time.” 1M1 also indicated that he focuses on vocabulary to discover “meanings to certain difficult words.” This shows the main concern of the students is related to sentence skills when they revise their writing. However, 2F1 disagrees saying:

“I do evaluate my writing, I we used to do that maybe unconsciously in writing in high schools before we get our IELTS {International English Language Testing System}, you write an essay maybe you don't have good background or whatever, topic, but at the end when you finish…I know I'm going to get ten out ten or eight out of ten. You evaluate your writing overall, not the grammar, not the spelling.”

This shows that students generally focus on sentences skills at the expense of other important criteria such as unity, coherence, and logical organization and development.

5. **CONCLUSION**

This research study found that CW was not taken into consideration in ESP courses. Moreover, the findings revealed that memorization was prioritized over creative thinking. In addition, the study revealed that students preferred using their mother tongue in thinking and creating ideas rather than using a FL. When those ideas are translated to the FL this negatively affects the fluency and accuracy in the FL. In the revising process, the students do not focus on the logical organization of ideas and their main concern is the use of language skills such as spelling and grammar.
Reading and CW activities can be a rich source for teaching creativity and promoting students to think creatively, but they are scarce in ESP courses. Therefore, it is highly recommended to develop ESP courses and include interesting reading and CW activities which can positively enhance the learning of target language, increase students' confidence, improve fluency, develop creativity, and support effective learning. The learners need to be well-motivated to read and write different pieces of CW in their ESP courses. They should be exposed to a useful variety of interesting sources such as extracurricular activities (e.g., watching movies, playing video games, and participating in ESP CW competitions) to improve their creativity in technical writing inside and outside the classroom. This requires ESP textbook writers to include more fiction, reading texts, and CW in their ESP courses to develop students’ creativity. The instructors should also raise their students' awareness about CW and motivate them to think, read, and write creatively using their FL.

This study provides valid and reliable findings and bridges the gap between the related literature and ESP CW. If the students are not well-motivated to read and write creatively, they will achieve limited progress in CW. The students should be encouraged to read critically and write creatively to achieve effective language learning and develop their creativity. CW activities should constitute a key part in ESP courses, and more ESP courses should be included in the undergraduate study plans. Finally, more related studies are recommended using different research instruments and having more samples from other specializations and institutions.

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