

Insights from ESP Education in the Digital Era

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ABSTRACT

Academic instruction has undergone a significant transformation due to the digital transformation of education, which has been accelerated by globalization, COVID 19 pandemic and technological advancements. Through the prism of an ESP (English for Specific Purposes) elective course for engineering students, this study examines the opportunities and difficulties associated with ESP online learning. The study examines how engineering students interact within Academic English course in a virtual setting and how digital platforms affect language learning, academic literacy, and learner autonomy using qualitative data from students' reflections and feedback. It also highlights the necessity of teaching engineering students' digital literacy to help them successfully navigate academic conventions and online platforms.

Keywords: ESP challenges, on-line education, professional education, engineering students

INTRODUCTION

In the modern globalized world, English is considered now as the dominant language in academia and there is a consequent development towards an increase in English medium teaching, and Turkey is not an exception. Turkish universities today are becoming increasingly bilingual. The number of programs offered in English has tripled in the last 10 years in Turkey. With visiting scholars and exchange students, Turkish universities are becoming increasingly diverse linguistically (Björkman, 2008). This is no exception to Piri Reis University, a leading maritime university and a major provider of Turkey's maritime research and education. English is the language of instruction in the later years of many programs at Piri Reis University.

Following COVID 19 pandemic, global digitalization of education and technological advancements pushed into life a large number of on-line programmes including the area of teaching academic English for professional purposes to engineering students. Learning Academic English on-line for professional purposes brings changes into the pedagogical ideology of the teaching process. As a result the attention now given primarily to the on-line course output. An important transition is now being observed in the linguistic contents of the ESP on-line curricular. The content of any ESP on-line learning is no longer purely linguistic, but rather a mix of digital, communicative and professional competence. The context of on-line learning is not made of everyday life simulations, but rather vocational situations that would preferably reflect not so much the scope of the English language lexis and grammar but rather the richness and innovative leadership in the chosen professional areas (Millrood, 2014).

The on-line curricular of teaching Academic English for professional purposes can no longer be as stable and everlasting as the lexis-and-grammar based curricular in the not so very remote past. The reason is that cutting age information relevant to a certain profession is changing much more rapidly than the English grammar or vocabulary stock. This has to be reflected in the on-line curricular undergoing permanent change as synchronized with the change in the state of the art in a certain profession. On-line course output is measured against the standards that are dictated not only by language teaching priorities, but rather by a set of

competences required by the State Educational Standard in a chosen professional field as approved by the Ministry of Education of Turkey. The change in pedagogical ideology leads to the change in the on-line teaching methodology.

We assume that challenges and problems in the on-line Academic English course faced by engineering students are due to their linguistic and literacy settings, their stance on academic writing and universities giving privilege to middle-class literacy practices. As an example, students at the maritime universities are presumed to have excellent English language and high level of thinking skills e.g. logical and critical thinking as well as analytical and innovative skills. Nevertheless, in recommending for these high level thinking skills, universities are usually not aware or not concerned about the schooling experiences of students and how they have an impact on their writings in the university (Pineteh, 2012). So, students who have the privilege of attending various English language proficiency courses to sharpen their language skills will have an advantage compared to those who do not have such experience. Hence there is a wide gap between the haves and the have nots. To express this more articulately academic writing is a literacy practice rather than a skill as writing in higher education is not merely a set of methods that are separate from the social context (Archer, 2010).

Purpose of the research

From a very general perspective, future engineers at university level learn English for academic degree (English for specific purposes), implementing a successful career in the chosen professional field (English for occupational purposes), addressing individual tasks in profession (English for individual purposes). Taking the information mentioned, the essence of teaching Academic English course on-line for professional purposes means that the Faculty has to meet the aspirations of our students to continue their education in a different working environment or to seek employment there. Teachers have to consider the natural desire of our students to achieve the mastery of a profession, for the sake of promotion in one's position. But at the same time teaching Academic English on-line requires awareness of on-line classroom environment problems and obstacles that may influence students' personally significant goals in the future profession.

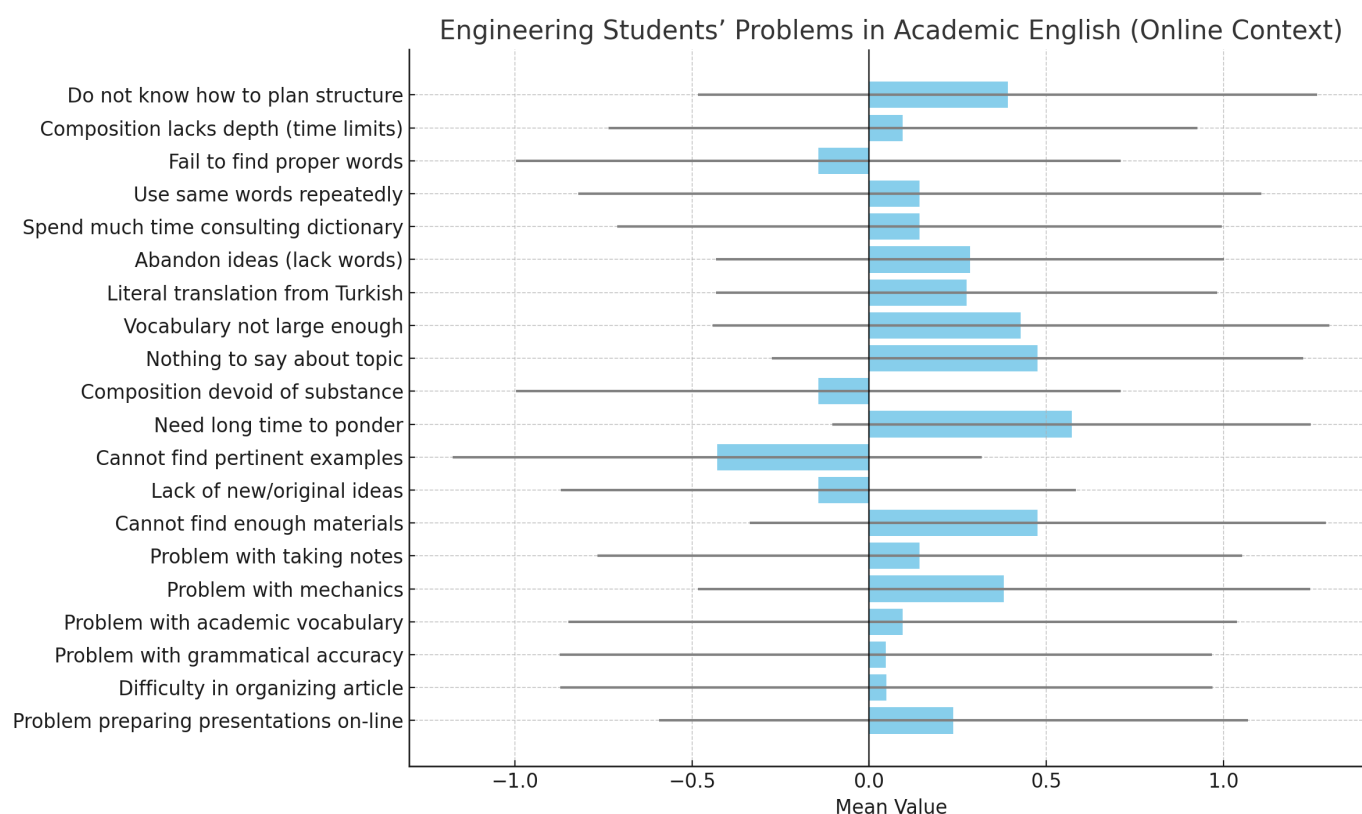
LITERATURE REVIEW

For non-native speakers Academic English course is a challenging task who are in the transition period from secondary education to tertiary or university education (Fong, 2009). Engineering students face double challenge as they not have to cope with understanding new subjects at the university but also the ability to understand general English which is used as the medium of instruction. Although many of future engineers have learned English for 1 year at the English Preparatory Department, they still faced enormous challenge in understanding English which is used at university level. They have to understand the core subjects although most of the references are not in their native language and there are many new technical jargons and terminologies that they have to understand. They also have to acquire the writing skills especially in their discipline and be good in using the relevant references (Wong Sowat, 2013). After COVID 19 pandemic in the world the discussion on the problem of English language proficiency among future engineers and new trends of teaching Academic English on-line in Turkey has become very actual.

Research data

The research is based on a questionnaire in the form of 20 statements containing possible challenges traced during the on-line Academic English course in 2024-2025 at the Faculty of Engineering. 60 freshmen engineering students were interviewed. Their majors comprise electrical, mechanical and civil engineering, which are the mainstream of the engineering disciplines in the context of Turkish tertiary engineering education. Students were asked to express the degree of their agreement with the statements in the questionnaire using the following scale: strongly agree (+3), agree (+2), partially agree (+1), no idea (0), partially disagree (-1), disagree (-2), strongly disagree (-3). The UBIT LMS SaaS software package was used for processing the statistical data from the valid responses (see Table 1).

Table 1. Engineering Students' Problems in Academic English (Online Context):



DISCUSSION

The questionnaire shows that most engineering students have faced problems during on-line classes in Academic English. The deviations in scoring to the statements shows that students differ among themselves along the lines of the English language competence, use of academic writing and ability to get involved in on-line language studies. According to the Table 1, engineering students' primary challenges with online Academic English are more related to idea generation, resource availability, and time management in writing than to grammar or mechanics. The biggest obstacle is having to think about what to write for a long time, which shows insecurity in organizing and developing ideas. Along with feeling they have nothing to say about the subject and having trouble finding sufficient resources, students also point to difficulties with research, content creation, and critical thinking rather than just language proficiency. Vocabulary-related issues (limited vocabulary, overreliance on translation, and abandoning ideas due to lack of words) also rank relatively high, showing that students struggle to express themselves precisely. On the other hand, although to a lesser degree, issues with grammar, mechanics, and structure were also reported, indicating that technical aspects of writing are not the main obstacle. It's interesting to note that some items like "Cannot find pertinent examples" and "Lack of new/original ideas" even received negative scores, suggesting that not all students view these as serious issues.

CONCLUSIONS

In summary, the research indicates that engineering students tackling online academic assignments face more significant challenges related to cognitive and content aspects—like coming up with ideas, accessing resources, and developing topics—than they do with linguistic issues such as grammar and mechanics. This suggests that support should focus on creating strategies for brainstorming and planning ideas, teaching academic research skills to find resources and examples, and expanding specialized vocabulary to reduce reliance on translation. Moreover, the difficulties engineering students encounter in generating insightful, deep, and creative ideas online can be partly attributed to an overemphasis on practical skills. This highlights the need for a shift in pedagogical philosophy and methodology in online teaching.

Key findings from the questionnaire reveal both the strengths and weaknesses of online education. While engineering students valued the convenience and self-paced nature of their courses, many struggled with staying motivated, managing their time effectively, and honing critical academic skills like argumentation, referencing, and formal writing. The absence of face-to-face interaction also made collaborative learning and spontaneous language use more challenging, both of which are crucial for mastering academic discourse. On the bright side, the use of multimedia resources, interactive tasks, and asynchronous discussion forums offered alternative ways for students to engage and reflect.

It would also be beneficial to investigate specific teaching strategies that can assist students in enhancing their idea generation, resource use, and critical thinking in online academic writing. Conducting comparative studies across various engineering disciplines or universities could help determine whether these challenges are widespread or specific to certain contexts.

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