

GEFAD/GUJGEF 42(3):2393-2429(2022)

## Designing an EAP Course for Undergraduate Engineering Students\* \*\*

### Lisans Düzeyindeki Mühendislik Öğrencileri İçin Akademik Amaçlı İngilizce Dersi Tasarımı

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*Makale Türü/Article Types: Araştırma Makalesi/ Research Article*

*Makalenin Geliş Tarihi: 31.07.2021*

*Yayına Kabul Tarihi: 04.03.2022*

#### **ABSTRACT**

*This case study specifies the academic English needs of English Medium Instruction (EMI) Electrical and Electronics Engineering (EEE) students in a state university in Turkey. Curriculum design process of the project rested on Nation and Macalister's (2010) framework. 33 students, five instructors in EEE department, and a language instructor took part in the need analysis (NA) stage. The data collection tools included checklists, questionnaires, and semi-structured interviews. The quantitative data gathered through the student and instructor questionnaires were analysed through SPSS Statistics v.22 software package programme. Codes, categories, and themes were generated to interpret the qualitative data. Based on the findings of the NA and environment analysis, we offered curriculum renewal for the English I-II courses by taking students' learning needs and environmental constraints into account. The resulting data revealed that the existing English for General Purposes (EGP) course failed to satisfy both students and instructors. An English for Academic Purposes (EAP) course geared towards motivating students towards using English in their departmental courses and future work/studies was suggested. The results of the NA as well as the chosen principles were the main drivers and determinants of the goals, content, format, and proposed assessment procedures of the new course.*

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\* **Reference:** Çiçek, M., Özkal, C. and Daloglu, A. (2022). Designing an EAP course for undergraduate engineering students. *Gazi University Journal of Gazi Education Faculty*, 42(3), 2393-2429.

\*\* This study was presented at the 1<sup>st</sup> International Foreign Language Education Symposium (2021) at Gazi University, Turkey.

**Keywords:** Curriculum design, Need analysis, Environmental analysis, English for academic purposes

## ÖZ

*Bu vaka çalışması, Türkiye'de bir devlet üniversitesinde İngilizce eğitim veren Elektrik-Elektronik Mühendisliği öğrencilerinin akademik İngilizce ihtiyaçlarını belirlemek amacıyla hazırlanmıştır. Çalışma, Nation ve Macalister'in (2010) program geliştirme modeli temel alınarak oluşturulmuştur. İhtiyaç analizi aşamasında, 33 öğrenci, bölümünde görev yapan 5 öğretim üyesi ve bir yabancı dil öğretim görevlisi yer almıştır. Nicel ve nitel veriler; kontrol listeleri, anket ve yarı yapılandırılmış görüşmeler aracılığıyla toplanmıştır. Öğrenci ve öğretim elemanı anketleri aracılığıyla toplanan nicel veriler SPSS Statistics 22 paket programı ile analiz edilmiştir. Nitel verileri yorumlamak için kodlar, kategoriler ve temalar oluşturulmuştur. İhtiyaç analizi ve çevre analizinin bulgularına dayanarak ve öğrenme ihtiyaçları ve çevresel kısıtlamalarını dikkate alarak İngilizce I-II dersleri için öğretim programı değişikliği önerilmiştir. Elde edilen veriler, mevcut Genel İngilizce kursunun hem öğrencileri hem de öğretmenleri tatmin etmediğini ortaya koymuştur. Öğrencileri bölüm derslerinde ve gelecekteki çalışmalarında İngilizce kullanmaya motive etmesi muhtemel bir Akademik Amaçlı İngilizce (EAP) dersi önerilmiştir. İhtiyaç analizinin sonuçları ve seçilen ilkeler; yeni oluşturulan programın amaçlarını, içeriğini, formatını ve önerilen değerlendirme prosedürlerini belirleyen ana unsurlardır.*

**Anahtar Sözcükler:** Program geliştirme, İhtiyaç analizi, Çevre analizi, Akademik amaçlı İngilizce

## INTRODUCTION

When taken at face value, English medium instruction (EMI) refers to the practice of delivering academic content by means of English. Though the EMI phenomenon is not a well-established notion and still in a state of flux, more and more tertiary institutions across the world are adopting EMI as part of their instructional policies. EMI is being evaluated differently around the globe and sometimes subsidized, disallowed, or revisited. Dearden (2018) argues that the impetus behind EMI practices of stakeholders and tertiary institutions is to globalize their educational system, thereby introducing an international image, prestigious status, and global publicity as well as rising in world university rankings. This sort of generalisations, however, can mask the other side of the coin, that is, EMI is still a contested and complex issue in many contexts and is opposed due to political motives, to preserve the native language and thus the national

character, or to grant students the freedom to learn in their own language (Dearden, 2014). Along similar lines, Bayraktaroğlu (2012) strongly challenges such practices on the grounds that EMI is manipulated as a marketing tool for profit-making. He further posits that such practices sometimes turn into a type of “only for show” schooling that pushes students towards rote learning. All in all, a state-of-the-art article on EMI points to inconclusive empirical evidence not only on whether it improves language learning or proves detrimental to content learning but also on what sort of practices yield favourable outcomes (Macaro et al., 2018).

A considerable number of higher education (HE) institutions, already impacted by the current financial, political and technical developments, attempt to make their students acquire the skills required to be successful global citizens and improve their employability prospects (Alvarez-Mayo et al., 2017). The aforementioned phenomena have also fuelled the developments in delivering language education in tertiary contexts. Accordingly, in addition to teaching linguistic skills, modern language education is now making strenuous efforts to boost students’ employability skills, such as how to communicate effectively, think critically, solve problems, use technology, cooperate with others, and improve intercultural competence – to name a few (Alvarez-Mayo et al., 2017). Indeed, academic language proficiency contributes substantially to academic success, but many students arrive at HE institutions without the linguistic repertoire demanded for achieving academic success. In this case, an eight-month preparatory period that will leverage students’ language proficiency required to pursue their academic studies, either under the roof of English for General Purposes (EGP) or English for Academic Purposes (EAP) seems indispensable. However, HE instructors are not convinced that this education suffices to equip students with sufficient linguistic background in an EMI context because these students may not attain higher proficiency levels in English during that limited period, nor are they motivated enough to learn English, considering that their ultimate aim is to master their subject area, not to learn a new language (Dearden, 2014).

Though EAP has been described differently and extensively thus far, it basically refers to “an approach to language education based on identifying the specific language features, discourse practices, and communicative skills of target academic groups, and which recognizes the subject-matter needs and expertise of learners” (Hyland, 2018). Currently, HE institutions are showing an increasing tendency towards delivering their classes in English within the framework of EAP programmes, which allow students, notably freshmen or sophomores, to further their education effectively and improve their communication skills necessary for successful interaction with other individuals through English (Üstünel & Kaplan, 2015). But does EAP truly work well in non-native tertiary contexts? Gillett (2014) argues there is some empirical evidence that EAP functions well, notably in settings where the content of EAP courses relates to learners’ future academic needs. Hyland (2016) likewise argues for the customization of EAP courses, underscoring their success if they are tailored to address the learners’ particular academic needs. In contrast, some other line of evidence suggests that EAP falls short of the academic expectations due to uncoordinated courses deprived of environmental analysis (EA) and need analysis (NA), poor teacher training in this domain, insufficient courseware, scarce facilities, learners’ low language proficiency, disorganized schedules of classes, and low motivation of both teachers and students (Tavakolia & Tavakol, 2018). Given this complex EAP landscape, the underlying factor determining the effectiveness of EAP courses is to take local contexts into consideration while designing and implementing such courses that will respond to learners’ needs and fit in with the learning environment (Canagarajah, 1999; de Chazal, 2014; Gaffas, 2019).

### **Literature Review**

EA concerns the consideration of specific or broader situation to ascertain that the curriculum will suit and cater for the local needs (Nation & Macalister, 2010). Among the leading causes of faltering EAP programmes are presumably the deficiencies in logistics, human resources, educational programmes, financial costs, and instructional materials. Dearden (2014) summarizes the fundamental reasons why the existing educational infrastructure in many settings fail to promote successful EAP courses: lack

of trained teachers, unspecified language proficiency levels, lack of clear-cut institutional guidelines, and lack of EAP content at the pre-service and in-service level. Ellison et al. (2017) lists these factors as both learners' and teachers' language proficiency levels, the amount of work that teachers put into preparing class materials, and reduced student participation. In addition, the value placed on EAP courses can be raised by granting more credits or hours, but non- or low credit-bearing EAP courses may run the risk of downplaying their importance in the eyes of students (Cheng, 2016; Crossman, 2014; Douglas & Landry, 2021). Choosing the right textbook or other courseware is of particular note in the effectiveness of any EAP curriculum. The selection of textbooks that leverage learners' general command of English but do not contribute to their discipline-specific literacy skills or overall academic skills is among the factors that make them lose their enthusiasm for EAP courses (Constantinou, 2020; Üstünel & Kaplan, 2015). Another situational factor is the delivery of academic English courses in the form of general English courses. Most EAP students arrive at their freshman year after investing considerable time and effort in preparatory or foundation programme, thus the delivery of EAP courses, rather than EGP courses, will cater for their academic needs and facilitate their overall and discipline-specific academic learning (Cheng, 2016; Gaffas, 2019).

While EA informs us whether the intended course fits the context where it is delivered, NA provides information on whether and how this course can respond to the students' needs (Nation & Macalister, 2010). Admittedly, a curriculum customized perfectly to meet learners' expectations and wants is a myth, because the areas they deem unnecessary could be definitely where they need improvement, thus the key to a satisfactory EAP course is to bridge the gap between target needs and students' wants through a meticulous NA process. (Zglobiu, 2019). The relevant literature often refers to language proficiency levels, the amount of weight attached to academic literacy skills (reading, listening, speaking, writing), role of discipline-specific vocabulary, and place of study skills and strategies while conducting NA.

Students with proficiency levels in English as low as CEFR (Common European framework of Reference) A2 and sometimes even A1 as well as their EAP teachers remain under pressure to reach at least B2 level within only eight months (Alexander, 2012; Dearden, 2014). Many tertiary institutions in the UK mostly set IELTS 5.5-6 score profile (corresponding to B2 in CEFR) as the threshold proficiency level for international students to pursue their academic studies, and those unable to achieve these scoring bands are supposed to attend pre-sessional EAP courses until they reach this minimum benchmark (Pearson, 2020). In an EMI context in Japan, Aizawa et al. (2020) carried out a survey on 264 students and follow-up interviews with 13 volunteers, reporting that their proficiency levels ranged between A2 and C1, with the majority falling into B1 and B2 levels. Note that these respondents had already completed an 18-month preparatory (ESP) programme and were in their freshman year at the time of data collection. Some literature reports recommend CEFR B2 level as an appropriate minimum benchmark to engage effectively in academic lessons (Harsch, 2018), yet even if this proficiency level is achieved, it does not necessarily guarantee the elimination of linguistic challenges which EAP students need to counter during their studies (Aizawa et al., 2020).

Apart from what proficiency level(s) should be set as the threshold required to take an EAP course, another point to ponder is the perceptions of departmental instructors regarding whether students' proficiency levels in English suffice to follow the content and instructions and to communicate successfully with instructors. A very recent systematic review by Macaro et al. (2018) reveals that lecturers believe their learners are linguistically inadequate to reap significant benefits from EMI courses in diverse contexts, ranging from Spain, France, the UAE, Korea to even Sweden, in which a large majority of the population allegedly know English. In relation to learners' self-perceptions of language proficiency, the same authors report some conflicting results: Thai students feel they lack sufficient background in English for content learning, while their Taiwanese and Hong Kongese counterparts feel confident in their command of English due to specific contextual factors. When it comes to Turkish students, they self-

report lower language competence in English, assuming that their proficiency level is inadequate to master their content knowledge (Bozdoğan & Karlıdağ, 2013). The issue of language proficiency in any EAP context is highly critical because learners' poor linguistic competence and performance might result in reduced participation in classes, impeding the learning of valuable knowledge in the specialized field of study (Dearden, 2014).

The difficulties faced by EAP students are closely associated with inadequate academic English skills, such as writing academically poor texts (Dvoretzkaya, 2016), listening to the lectures with great difficulty and understanding their lecturers' pronunciation (Aizawa et al., 2020), lacking self-expression in discussions and being uncomfortable in speaking during presentations (Kırkgöz, 2005), and reading challenging coursebooks including many unknown vocabulary (Macaro et al., 2018). More often than not, the perceptions and opinions of stakeholders (students, instructors, curriculum developers) vary in terms of the priorities that should be given to four skills, vocabulary, and study skills and strategies. While challenges in speaking skills are not voiced in some EAP contexts such as Hong Kong and Taiwan (Macaro et al., 2018), other studies highlight major challenges in academic spoken skills in other settings (Aizawa et al., 2020; Kırkgöz, 2005; Üstünel & Kaplan, 2015; Zglobiu, 2019). Moreover, producing written output such as short answers in exams, note-taking, essays, and reports is acknowledged as the most problematic skill since students are unable to write essays and reports during in-class time owing to time limitations and overloaded syllabus (Dvoretzkaya 2016; Üstünel & Kaplan, 2015). By contrast, Aizawa et al. (2020) document writing as the least challenging skill, and they associate this finding with context-specific factors, such as concentrating harder on writing activities during the 18-month preparatory period. One of the most-cited problems in mastering academic content, delivering academic speeches, and giving presentations concerns the lack of emphasis on technical vocabulary and field-related terminology (Bozdoğan & Karlıdağ 2013; Gaffas, 2019; Kırkgöz, 2005; Üstünel & Kaplan, 2015). For instance, Turkish learners of English complain that the lexis taught in EAP courses is of little use and benefit and thus ask

curriculum developers and instructors to allocate more time on teaching academic vocabulary required for their specialized area (Üstünel & Kaplan, 2015). The last but not the least, EAP students are also in need of acquiring study, reflective, meta-cognitive, critical thinking, and problem-solving skills in addition to mastering discipline-specific content in order to become autonomous individuals who can assume the responsibility of their own learning (Dvoretzkaya, 2016; Üstünel & Kaplan, 2015).

Assessment procedures are also another domain addressed by theoretical and empirical investigations on EAP programs (Elizabeth & Zulida, 2012; Knudsen, 2014; Li & Wang, 2018; Weigle & Malone, 2016). The changing concept of academic language poses various challenges for EAP assessment. Weigle and Malone (2016) argue that only standardized testing is not capable of meeting the linguistic needs peculiar to an academic field and reflect the communicative exchanges in verbal and written academic settings. They also challenge the sole use of standardized tests in EAP assessment since they do not test subject matter knowledge or measure learners' competence in particular subject areas. Alternatively, Li and Wang (2018) adopt a project-based pedagogy in their EAP program and base their assessment on students' end-of-term project, reporting improved academic language proficiency, disciplinary knowledge learning, disciplinary identity construction, learner autonomy, interpersonal skills, and teamwork. Knudsen (2014) assesses whether problem-based learning can make learners develop an intrinsic motivation to master academic content within the context EAP programme and documents higher learner satisfaction at the end of the programme.

If the evaluation of the whole curriculum is to be targeted, not only summative but also formative assessment strategies need to be administered to achieve a complete picture (Chiarelott, 2006). Salter-Dvorak (2016) evaluates an EAP program at a UK university by triangulating the data derived from questionnaires, focus group and individual interviews, discussion notes at staff meetings, and an ethnographic case study. Through the triangulation of document analysis and interviews with some leading ELT specialists, Iranmehr et al. (2018) investigate the degree to which the goals of EAP education in general are practised in Iran. In the Turkish context, Öztürk (2013) makes



use of a wide spectrum of data collection tools. For the quantitative data, he administered a large testing battery, including questionnaires, surveys, document analysis, end-of-term evaluation as well as test results derived from progress checks, pop quizzes, achievement tests, and extended reading tests. As for the qualitative part, he carried out individual and focus group interviews and kept a classroom observation checklist.

### **Theoretical Framework**

Nation and Macalister's (2010) framework that takes a non-linear approach to curriculum design was adopted in this study to guide the researchers through the curriculum design process. These scholars present a curriculum design process by illustrating it through inner and outer circles. The outer circles (principles, environment, needs) are based upon practical and theoretical considerations, whereas the inner circles stand for goals, content and sequencing, format and presentation, and monitoring and assessment. Besides, in the outermost part of this diagram lies the evaluation component of the whole curriculum design.

In line with Nation and Macalister (2010), we first conducted the EA and NA to reveal whether the current English I-II courses intended to function as EAP courses in an Electrical and Electronics Engineering (EEE) department respond to learner needs, environmental constraints, and language learning and teaching principles. We then presented our discussion of curriculum renewal project, decided on the nature of inner circle components, and evaluated the curriculum design undertaking for these courses.

Considering the aim and need for the study, the questions guiding our research were formulated as follows:

1. What are the first year EEE undergraduate students' perceptions in terms of the importance of the language sub-skills (speaking, listening, reading, writing, study strategies) in relation to their English language learning needs?
2. What are the instructors' perceptions in terms of the importance of these language sub-skills in relation to students' English language learning needs?

3. What are the challenges that the instructors and students in EMI programme encounter when the students start to pursue their studies in the EEE department?

### **METHODOLOGY**

This case study aims to identify the language needs of undergraduate students in the EEE department (100% English). In doing so, it is expected to reveal whether the current English I-II curriculum can adequately address students' needs, lacks and wants. An NA involving freshmen and sophomores of the EEE department, the instructors of the department, and the ELT instructor delivering the course was conducted to analyze the students' needs and to present relevant recommendations in the light of this analysis. Apart from the NA, an EA regarding the environmental factors, such as the time available for the course, the size of the class, the immediate and future needs of the learners, availability of teaching materials, students' access to technology, and teachers' competency, was carried out by means of a checklist suggested by Nation and Macalister (2010).

After the ethics approval for the study was granted by the Institutional Review Board, the data was collected through checklists, questionnaires, and semi-structured interviews. The questionnaire was sent via e-mail to 100 freshmen and sophomores in the EMI EEE programme. As the programme is newly founded, the total number of students is only 100. The departmental instructors were asked to implement the questionnaire during their classes, and the return rate was slightly over 30%. Semi-structured interviews were held with five students enrolled in the first year. Out of 13 instructors delivering the courses at the EMI EEE programme, five completed the questionnaire and the same five agreed on the interviews.

#### **Context**

The scope of this study conducted at a state university in Trabzon, Turkey was limited to the EEE department. This engineering department launched a new programme with the medium of instruction being 100% English during 2018-2019 academic year. The

students are required to reach at least B1 level before starting their content area courses in their departments. No written curriculum exists for the English I-II courses delivered in the first year of the degree programmes. Therefore, the language instructors practising in these programmes are left to their own means to make instructional decisions. Rather than building their instruction on curricular principles or clear objectives, they tend to draw on Internet-based materials and coursebooks, hence the practices and materials adopted by these instructors manifest considerable variations. Besides, since these courses are delivered in the EGP format, they may suffice to improve engineering students' general command of English but fail to equip them with the required level of academic English to participate actively in their departmental courses and conduct their studies in English.

### Participants

The information regarding the participants and the data collection tools are presented in Table 1. The convenience sampling method was employed to recruit the participants for the study. 33 EEE students in the EMI programme, five departmental instructors, and 1 ELT instructor eventually volunteered to participate in the study.

**Table 1.** Participants Involved in the Data Collection Process

Participants	n	Data Collection Tools
Students	33	Questionnaire
	5	Semi-structured interviews
Academic teaching staff in the EEE department	5	Questionnaire
	5	Semi-structured interviews
ENG I-II instructor	1	Questionnaire
	1	Semi-structured interview

**Instruments**

The data for the current study were gathered by means of a checklist, questionnaires (instructor and student version), and semi-structured interviews conducted with both instructors and students. The questionnaires for students and instructors were adopted from Doruk (2006).

***Reliability and validity of data collection tools***

Cronbach's Alpha reliability score was found to be  $\alpha = .94$  for NA Questionnaire, indicating high reliability. The items were assessed by three experts from the field in order to ensure face validity of questionnaire. In the forthcoming stage, both qualitative and quantitative data were triangulated to ensure the validity and reliability of the study. For qualitative data, the researchers generated codes individually, and these were compared to ensure the trustworthiness of the data analysis.

***EA checklist***

In order to address the situation-specific constraints that learners, teachers and the situations bring to language learning and teaching, an EA was conducted. The questions for the EA were adopted from Nation and Macalister (2010).

***NA Questionnaire for the Students***

The NA questionnaire sent to students at the beginning of the study via e-mail consists of three parts. The first part required the students to indicate their year in the programme, their initial level of English proficiency in the preparatory class, the number of courses they have taken in the department, and their perceived level of proficiency in four skills. The second part asked the participants to evaluate speaking, listening, reading, writing and study skills and the sub-categories of these skills. Based on a five-point Likert scale ranging from very important to not important (1: not important, 2: slightly important, 3: moderately important, 4: important and 5: very important), the participants were asked to rate their academic English needs in terms of

five skills and their sub-skills. The final part included an open-ended question asking the students to express their preferred topics and activities for the English I - II courses.

#### ***NA Questionnaire for the Instructors***

The instructors' version consisted of two parts. The first part asked the instructors to rate students' proficiency in four skills, whereas the second part requires them to rate the academic English needs of the students regarding the aforementioned skills based on a five-point Likert scale ranging from "very important" to "not important".

#### ***Semi-structured Interviews***

Semi-structured interviews were performed to collect in-depth data from the instructors teaching subject disciplines as they were assumed to have an insight into their students' needs both in the department and in their future careers. These interviews included 10 open-ended questions concerning students' proficiency in English, the challenges faced by the instructors during teaching, the most important skills the students need to improve, and their suggestions for the English I - II curriculum. On the other hand, semi-structured interviews held with students covered (1) language-related challenges in their departmental courses, (2) skills and sub-skills that they found difficult, (3) their perceived proficiency in written assignments and exams, (4) their perceived proficiency in their speaking skills, (5) their satisfaction level with the English I-II courses, (6) their preferred learning activities, and (7) their suggestions for these courses.

#### **Data Analysis**

The quantitative data collected through the student and instructor questionnaires were analyzed through SPSS Statistics v.22 software package programme. The descriptive statistics were run to interpret the data. On the other hand, the qualitative data came from the semi-structured interviews with the instructors and students and the open-ended items in the student questionnaire. The interviews were transcribed verbatim and translated into English for analysis. Later, codes, categories and themes were generated to interpret the qualitative data.

**Compliance with Ethical Rules**

While conducting the current study, the ethics, principles, and rules mandated by Higher Education Institutions Scientific Research and Publication Ethics Directive were followed. Ethical approval for the current study was granted by the Middle East Technical University Applied Ethics Research Center, with the acceptance number 079-ODTU-2021 (Appendix A). Additionally, all the participants were required to read and sign a written consent form before the participation in the study which was entirely voluntary. They were informed about the purpose of the study and the privacy of the data they provided. Throughout the data collection, they were assured that they could leave whenever they wished.

**RESULTS****EA Results*****Student factors***

The English I-II courses are must courses provided in two semesters in the first year of the EEE programme for the students who have reached B1 level of English through formal language education. Those not having achieved this proficiency level are supposed to attend the school of foreign languages until they reach this level. The participants indicated that their proficiency levels on admission to preparatory class ranged from A1 to B1. The students who study degree-level subjects alongside the English I-II courses admitted that they could not spare much time on these courses due to their hectic schedule. Another reason voiced in relation to this issue was that English I-II were low credit-bearing courses. The semi-structured interviews and questionnaires pointed to the poor speaking abilities of the students who truly need this skill to pursue their academic studies and future careers.

***Teacher factors***

The ELT instructor, who holds a BA and MA degree in English literature, reported that he had too little time to develop instructional materials for the English I-II courses and thus relied on a coursebook owing to his busy schedule. In the previous years, he used to make use of web sources (i.e. [www.breakingnewsenglish.com](http://www.breakingnewsenglish.com)) to carry out the in-class activities rather than following a coursebook. In the meantime, he was the only instructor responsible for English I-II courses throughout the semester.

***Situation factors***

The departmental courses rest totally on English as medium of instruction in the newly-founded EEE EMI programme. The English I-II courses, developed and run by the school of foreign languages, have very limited class time (two hours a week). Besides, the ELT instructor remarked that large class size with fixed seating arrangement hindered the conduct of interactive sessions. Moreover, New Headway Intermediate, which was selected as the core instructional material, was found difficult by the students. Another negative comment concerned the physical environment where no technical equipment is available to perform listening activities efficiently within the scope of the English I-II courses. Since English functions as a foreign language in Turkey, the students were reported to receive limited exposure to English outside the school. Furthermore, the ELT instructors were free to build their own curricula for the English I-II courses, leading to a lack of standardized framework. Since no written curriculum exists, it is replaced by the coursebook, syllabus, and materials. The current course is delivered in the form of EGP which students found irrelevant to their academic needs in their departments. As the English I-II courses are low credit-bearing courses, the students are not willing to invest in much effort and time in them.

**NA Results*****NA Questionnaire***

In order to identify which sub-skills of speaking the students need in their departmental courses, the instructors and students were asked to rate the importance of the speaking

sub-skills. Table 2 shows the descriptive statistics for the sub-categories of academic speaking skills that students need to succeed in their departmental courses. The instructors rated the sub-skills higher than did the students in all 12 categories.

The items that received the highest mean scores from both the students and the instructors were asking for explanation and clarification, agreeing and disagreeing with providing reasons, and asking and answering questions respectively. Contrary to the students, defending a point of view in a discussion was a sub-skill that the instructors attached greater importance.

**Table 2.** Students' and Instructors' Ratings of Importance of Speaking Sub-Skills

	Students		Lecturers	
	Mean	Std. Dev.	Mean	Std. Dev.
1. Asking for explanation	3.15	1.34	4.60	.89
2. (Dis)Agreeing by providing reasons	3.09	1.44	4.60	.89
3. Asking and Answering Questions	3.03	1.28	4.60	.54
4. Introducing Yourself	2.94	1.22	4.00	.70
5. Summarizing or report information	2.91	1.54	4.40	.89
6. Engaging in small talk	2.91	1.25	4.00	1.00
7. Talking on the phone with foreign people	2.88	1.36	3.80	1.09
8. Expressing likes and dislikes	2.88	1.26	3.40	.54
9. Defending a viewpoint in a discussion	2.82	1.35	4.60	.89
10. Giving short academic presentations	2.73	1.39	4.20	.83
11. Participating in class discussions	2.48	1.32	4.40	.89
12. Demonstrating confidence in discussions	2.45	1.34	4.40	.89

Table 2 presents the mean scores and the standard deviations for sub-categories of listening skill. Both the students and instructors rated all the listening sub-skills high with lowest mean of 3.30 for listening to a lecture or documentary and produce a summary. What is striking in this regard is that all the instructors deemed all the items as more important than the students did.

**Table 3.** Students' and Instructors' Ratings of Importance of Listening Sub-Skills

	Students		Lecturers	
	Mean	Std. Dev.	Mean	Std. Dev.
1. Understanding main points	3.79	1.26	4.60	.89



2. Listening for keywords, main ideas and some details	3.76	1.11	4.20	1.09
3. Understanding daily and academic conversations	3.45	1.22	4.60	.89
4. Listening to a lecture or documentary and produce a summary	3.30	1.26	4.40	.89

Table 3 illustrates students' and lecturers' ratings of reading sub-skills. Accordingly, the participating students regarded almost all the sub-skills as important. The mean values of students' answers varied between 3.18 and 3.67, indicating that all the sub-skills concerning reading skills fell between the degree of "moderately important" to "important".

On the other hand, the faculty members seemed to place more importance on the reading sub-skills than students. The only moderately important item was "recognizing patterns of organization" from faculty members' point of view. The rest of the reading sub-skills were reported to be "important" or "very important" by faculty members.

**Table 4.** Students' and Instructors' Ratings of Importance of Reading Sub-Skills

	Students		Lecturers	
	Mean	Std. Dev.	Mean	Std. Dev.
1. Understanding specific points	3.67	1.26	4.60	.89
2. Understanding the instructions in the exams or assignments	3.67	1.26	4.60	.89
3. Understanding the gist of a reading text	3.58	1.34	4.20	.83
4. Deriving the meanings of unfamiliar words from the context	3.55	1.22	4.00	1.00
5. Drawing inferences from reading texts	3.48	1.12	4.40	.89
6. Outlining main points of a reading text	3.33	1.24	4.00	.70
7. Distinguishing facts from opinions	3.33	1.26	4.20	1.09
8. Reading abridged academic materials	3.21	1.45	4.00	1.00
9. Recognizing patterns of organization	3.18	1.28	3.80	1.09

Table 4 reveals that both the students and instructors are of the opinion that the students need all the academic writing sub-skills in their departmental courses. However, it is evident that there are discrepancies regarding the importance of the sub-skills between the instructors and the students. While the former assumes that the students generally

need almost all the sub-skills, the former feels that they rarely or sometimes need most of the writing sub-skills. The items receiving the highest mean score from the students were 1, 2, 3, 4, and 5, respectively. Contrary to the students, the instructors rate the items 4, 6, 7, and 10 as the most important ones.

**Table 5.** Students' and Instructors' Ratings of Importance of Writing Sub-Skills

	Students		Lecturers	
	Mean	Std. Dev.	Mean	Std. Dev.
1. Answering open-ended questions	3.15	1.27	4.00	1.00
2. Paraphrasing	3.12	1.47	4.00	1.00
3. Filling in forms	3.09	1.40	4.20	1.09
4. Writing e-mails	3.09	1.50	4.40	.89
5. Using grammatical structures accurately	3.06	1.22	3.80	.83
6. Writing letters	2.97	1.40	4.40	.89
7. Writing an accurate summary	2.94	1.43	4.40	.89
8. Writing reports for an assignment	2.91	1.58	4.20	.83
9. Producing academic paragraphs	2.91	1.40	3.60	1.34
10. Writing CVs	2.88	1.47	4.40	.89
11. Writing short academic papers	2.79	1.43	4.20	.83
12. Writing research papers	2.58	1.50	3.80	.83

Table 5 demonstrates the mean scores and standard deviations for the sub-categories of study skills from the students and the instructors' perspectives. The instructors regarded all the sub-skills as necessary with the lowest mean of 4.00, implying that the students need all the research skills in order to succeed in their departmental courses. On the other hand, the students believed that they mostly needed taking notes from lectures, presentations and videos, having basic research skills, using multimedia technology for research purposes, and reading journals in their departmental courses.

The third part of the questionnaire included an open-ended question that elicited students' preferred educational activities and topics for the English I-II courses. The rationale behind the inclusion of this question was to find out the students' wants. 37% of the students expressed that they would like to be subject to more speaking activities, such as chatting, debates, question-answer activities and presentations to strengthen their speaking skills. The students also stated that they wish to receive more listening

training covering a range of topics through various means, such as podcasts. It was also brought up by the students that the courses at issue should also focus on teaching terminological vocabulary since they feel the deficiency of not mastering enough technical vocabulary. In relation to interactivity, the students expressed their wishes for the addition of further group work. Under the “others” category, we listed the less stated wants, such as technology integration, extensive reading, essay writing, and fluency activities.

**Table 6.** Students’ and Instructors’ Ratings of Importance of Study Sub-Skills

	Students		Lecturers	
	Mean	Std. Dev.	Mean	Std. Dev.
1. Taking notes from lectures, presentations, and videos	3.33	1.13	4.20	1.09
2. Having basic research skills	3.30	1.15	4.60	.89
3. Using multimedia technology for research purposes	3.30	1.35	4.40	.89
4. Reading journals	3.24	1.30	4.00	1.00
5. Writing a comment and/or reaction paragraph	3.00	1.29	4.00	1.00
6. Using source materials from the library, databases and the Internet	2.94	1.58	4.40	.89
7. Using basic referencing techniques for an academic paper	2.91	1.37	4.40	.89
8. Getting feedback and support from the lecturers	2.73	1.42	4.20	.83
9. Becoming an active part of discussion groups	2.48	1.30	4.20	1.09

#### *Semi-structured Interviews with the Instructors*

The data from the instructor questionnaires revealed three main themes, including the challenges they faced while lecturing, the skills students had difficulty with, and the suggestions for the English I-II courses. When the departmental instructors were asked whether they were satisfied with the English proficiency levels of their students, the overall response to that question turned out to be positive. However, all the instructors, who found students’ speaking skills problematic, reported that the students were unwilling to interact and participate actively in classes, which was attributed to lack of self-efficacy, lack of confidence, fear of making mistakes, and shyness. Actually, the

concerns regarding poor speaking skills were articulated frequently. Another cited problem was that the students did not know sufficient amount of technical vocabulary related to their department. Only one of the instructors stated that she designed vocabulary practice before the class to familiarize her students with the upcoming terminology. A majority of the instructors indicated that the students either switched to their L1 when asking and answering questions in class or expected the instructors to use L1 when teaching key points of the lecture, notably when terminology knowledge was required. Though the instructors overall expressed that their students seemed to have achieved a satisfactory level of listening proficiency, one of them pointed out that the students faced challenges in understanding speakers from different backgrounds and their accents while streaming videos. In relation to suggestions for the English I-II courses, the majority recommended teaching discipline-specific terminology and reading passages.

#### ***Semi-structured Interviews with the Students***

A common view amongst the students was that they encountered various difficulties upon their transition to the department after receiving EGP in the preparatory class. As they did not have a good grasp of technical words, they experienced problems in mastering the content of the departmental courses. They expected the departmental instructors to scaffold them in terminology learning during the class time since they raised their concerns over the language instructors' field knowledge. Similar to the instructors, the students felt that they needed to improve their speaking skills most and suggested prioritizing speaking activities in the English I-II courses. As for writing skills, the majority reported to have experienced no major problems in writing thanks to machine translation, such as Google Translate. However, writing was reported to turn into a challenging skill in the absence of translation applications. The students pointed out that they were pleased with the current assessment procedures of English I-II as they could pass the class easily, but the project-based assessment was desired to improve their overall language skills. When they were also asked to express their preference for a course based either on EAP or on EGP, all agreed that an EAP course would be more

appropriate. While all the participants argued for a speaking-based course, some students suggested that both academic speaking and writing components need to be incorporated as they did not have a strong grasp of these two skills.

## DISCUSSION

We analyzed and interpreted the results of questionnaires, interviews and checklists in an attempt to strengthen the current English I-II courses, thereby catering for the needs and expectations of students and instructors. Ultimately, the collected hard and soft data were triangulated not only to cross-validate the obtained findings but also to boost the validity and reliability of the results. Accordingly, goals, content and sequencing, format and presentation, and monitoring and assessment for the courses were decided in line with the results of NA and EA and language teaching and learning principles.

### Goals

The EEE department aims to carry out scientific research and education activities in all areas of EEE at an international level. The goals targeted for the new English I-II courses were re-formulated in accordance with the EMI EEE programme's overall aim and vision as well as the EA and NA unearthing the students' academic needs, wants, and necessities in four skills, sub-skills, and study skills.

The findings of NA questionnaire, reading, listening and research skills were rated higher than speaking and writing skills by the students. On the other hand, lecturers prioritized all five domains. The interviews made it clear that receptive skills (reading and listening) carried greater weight for both students and lecturers, which is also confirmed by the results reported by (Macaro et al., 2016; Şahan et al., 2016).

The need expressed by both students and lecturers regarding the teaching of discipline-specific vocabulary and general academic words confirms previous evidence garnered from other EAP studies (Bozdoğan & Karlıdağ 2013; Gaffas, 2019; Kırkgöz, 2005; Şahan et al., 2016; Üstünel & Kaplan, 2015). Since these students receive EGP education in the preparatory period, they are faced with a challenging transition from

preparatory class to departmental courses. It was voiced by both stakeholders that an EGP course could not readily prepare students for their academic studies and work, which is also cited in the literature (Cheng, 2016; Gaffas, 2019).

The information gathered from the semi-structured interviews was key to figuring out the discrepancies between students and instructors' survey results. Only the sophomores surveyed received face-to-face education during a semester in their departments. On the other hand, the freshmen started their departments with distance education. Both students and instructors complained that the departmental courses taught online failed to have an interactive nature, hence the students did not draw on many skills they would use in a regular class. Besides, as the students were either in the first and second year of their undergraduate studies, the students were reported to need further sub-skills in the upcoming courses. Consequently, when deciding on the goals, the instructors' views carried greater weight. This scenario is also emphasized in other studies suggesting that learners' expectations and wants may not always match the targeted needs of the instructors and curriculum developers (Zglobiu, 2019). Thus, what counts in such a case is to strike a sensitive balance between the stakeholders by also taking contextual parameters into consideration.

Even though our student respondents rated speaking sub-skills as moderately important in the questionnaire, they underscored the importance of speaking competence in English both for their departmental courses and future careers. This discrepancy may be caused by the items about speaking skills including some general English items, such as expressing likes and dislikes or introducing yourself. Indeed, the EAP literature reports conflicting results, with some research not placing spoken skills at the top priority in particular settings (Macaro et al., 2018) and some other research attaching the utmost importance to speaking skills (Aizawa et al., 2020; Kırkgöz, 2005; Üstünel & Kaplan, 2015; Zglobiu, 2019). Unlike the students, our participating lecturers in the EEE department rated the speaking subskills as important to very important. Presumably, the nature of emergency remedial teaching that these students had gone through may account for this inconsistency between the students and lecturers concerning speaking

skills. Because the classes held online since the outbreak of the COvid-19 pandemic were delivered in the lecturing format, the students might not have imagined that they would need these subskills during the face-to-face classes.

### **Content and Sequencing**

Our curriculum draws on skills as the main unit of progression. A skill-based approach emphasizing macro and micro skills associated with four skills is adopted to equip the students with the skills they need in their department. Our starting point is thus skill development, and unit of progression was the sub-skills of four skills along with study skills. Furthermore, a modular approach to sequencing is adopted; that is, the course is divided into non-linear units, each of which are further divided into four sections as reading, writing, speaking, and listening. In that regard, we expect the course to be a content-based one which provides students with language- and discourse-rich learning environment and facilitates the acquisition of vocabulary in specific disciplines and the overall academic literacy skills. Crossman (2014) lists many benefits of content-based approaches in EAP contexts such as relevant input, recycled lexical items, high motivation, low anxiety, and easier learning of academic content knowledge.

In accordance with our principles, the most common academic words and high-frequency elements are included in the teaching materials. Besides, strategy teaching, such as preparing presentations and evaluating content, is prioritized so that the students can make use of these skills and take responsibility for their learning. EAP students need to be equipped with appropriate study and strategy skills such as thinking reflectively, meta-cognitively, critically, and analytically (Dvoretzkaya, 2016) so that they become independent learners capable of taking responsibility for their own learning (Üstünel & Kaplan, 2015; Zamin & Asraf, 2017).

### **Format and Presentation**

In this curriculum renewal project, the instructional and learning techniques as well as the design of the lessons were guided by the information derived from our NA, EA, and the adopted principles in an effort to maximise the learning outcomes.

The selection of an appropriate coursebook occupies a prominent place in the effectiveness of EAP courses. The selected book should be able to improve students' discipline-related knowledge and general academic skills in addition to leveraging their general command of English so that they do not lose their enthusiasm for the courses (Constantinou, 2020; Üstünel & Kaplan, 2015; Zamin & Asraf, 2017). Since the ELT instructor is pressed with time due to his instructional responsibilities, using coursebooks is suggested for the English I-II courses: "Oxford EAP B1+" (Chazal & Rodgers, 2012) and "Cambridge English for Engineering" (Ibbotson, 2008). "Oxford EAP B1+" can be utilized for English I in the first term and "Cambridge English for Engineering" for English II in the second term of the first year. However, they are not must books, and the instructor is free to develop his own materials. In this sense, the course is expected to be flexible, allowing both the teacher and the learner to select the relevant modules according to their goals and priorities.

The format and presentation of the selected instructional materials fit in with our curricular principles to the greatest extent possible. To begin with, the motivating, interesting, and engaging activities that cater for learner needs and are likely to make them genuinely love learning. Second, the chosen coursebooks devote the desired amount of space to each strand at an approximate proportion to what we set out to achieve (30 per cent for meaning-focused output, fluency development, and meaning-focused input each, and 10 per cent for language-focused learning). Third, the format of the coursebook gives a quarter of the class time to developing receptive skills like listening and reading. Fourth, the format of the coursebook allocates at least a quarter of instructional time to production activities, such as engaging writing exercises and speaking-based performances. Fifth, the format and presentation in the coursebooks provides enough room (40%) for learners to speak, listen, write, and read English fluently. Sixth, the critical thinking activities, problem-solving exercises, information gap exercises, comparing and contrasting various ideas, guessing from the context, case studies, making presentations, and writing essays in different discourse formats presented to the learners in the coursebooks allow them to process the language deeply.



Finally, the format of the coursebooks allows for independent and pair/group works, aural and written input, expression of ideas through language or visuals, covering themes holistically and analytically, and getting learners to understand ideas or perform tasks.

With respect to learner-related issues, the layout of the coursebooks is projected to appeal to the students since they are professionally designed and enriched by high-quality visuals. They follow a set format in which the activities are ordered in the same sequence in all the lessons. The rationale behind this decision is that the course and lessons can facilitate designing, monitoring, and learning since the students will be familiar with the learning procedures over time. To illustrate, in Oxford EAP, each lesson opens with learning objectives and discussion section designed for brainstorming purposes, continues with listening and speaking sections, progresses with reading and writing activities, and closes with vocabulary and academic vocabulary check.

As suggested by Woodward and Lindstromberg (1995), lessons can be planned in the form of “blocks” in which the content is presented in a set format and each block is complete in itself. In our case, the block format is set as listing objectives, discussion for brainstorming, aural/oral activities, written input, and language-focused activities. The rationale for following such a block format is that the blocks are selected in line with our pre-determined goals, and that they help to minimize the burden of lesson planning due their predictable nature. On the other hand, “threads” are the instructional activities repeated in the following lessons which can be utilized with minimal planning and minor modifications. To illustrate, listening to lectures and presentations, participating in seminar and group discussions, taking notes on key information, predicting about a text, identifying main ideas, responding to a presentation, evaluating a peer presentation or writing etc. are some of routines that students will be familiar with.

The instructional activities designed in these books fit in with students’ proficiency levels (B1 in the fall semester, B2 in the spring semester), fit a variety of learning styles (visual, auditory, verbal, logical, interpersonal, intrapersonal), and suit the class size

(enough for 45 students). The techniques and activities employed while arranging lessons can be categorized under four main headings, such as experience, shared, guided, and independent activities. In our format and presentation, all the aforementioned activities are given space with varying degrees in accordance with our principles and goals.

Feasibility-wise, the coursebook is easy to carry, includes enough material to be covered in a lesson in terms of time duration, and allows for activities to be performed within the physical limitations of the classroom. Furthermore, the coursebook format caters for the future needs of the learners by presenting relevant engineering activities, such as describing specific materials, discussing repairs and maintenance, suggesting ideas and solutions, working with written instructions, and explaining tests and experiments.

### **Monitoring & Assessment**

Under the present circumstances, the students in English I-II courses are subjected to one mid-term and one final exam as part of the summative assessment. The main skills assessed in these exams which consist of reading, vocabulary, and grammar, are basically tested through multiple choice items. As identified by previous reports (Weigle & Malone, 2016), however, standardized testing falls short of meeting the specific linguistic needs of an academic field and measuring the communicative exchanges in spoken and written contexts. Standardized tests also do not measure discipline-specific knowledge or students' skills in subject areas (Li & Wang, 2018).

In line with our principles and demand from the students, speaking will be evaluated based on 10-minute presentations. As demanded by the students, the presentation topics will be decided by the students themselves. In addition, the reading skills of the learners will be tested by monthly reading tests (achievement testing), which will add up to four tests overall. These tests will contain items which question vocabulary knowledge in the form of guessing from the context, allow for deep-processing and critical thinking, and include a wide range of topics to respect individual differences and to boost intrinsic

motivation. On the other hand, listening skills of the students will be evaluated by monthly listening tests (achievement testing), which will amount to four tests in total. In accordance with the student demand that technology should be integrated into the course and in order to enhance their intrinsic motivation, listening tests will be in the form of video-listening, especially carefully selected YouTube videos. Finally, a traditional achievement testing will not be adopted in assessing writing. To start with, students are expected to write a paragraph on a given topic every two weeks, which will amount to eight paragraphs. These written pieces will be stored in student portfolios, forming one part of their final grades.

The participating students also stated that a project-based assessment would help them improve. Considering that the classroom population is around 45 and the course instructor is already burdened with teaching responsibilities, nine projects consisting of five students each constitute one part of their final grades. In the meantime, since feedback has the potential to give rise to substantial improvement in communication process, notably in writing (Franken, 1987), sufficient amount of feedback will be provided by the instructor both during the activities within class hours and after the testing of all the skills. The demand of the participating students for engaging in an end-of-term project as part of the assessment is quite timely and valuable because there is accumulating evidence suggesting that project-based learning and assessment improves academic language proficiency, disciplinary knowledge learning, disciplinary identity construction, learner autonomy, interpersonal skills, and teamwork (Li & Wang, 2018) and increases students' intrinsic motivation to learn their subject matter content (Knudsen, 2014).

The instructors will be trained on assessment issues to achieve reliability, especially on consistent marking. In addition, the proposed assessment types achieve construct validity since they seem to align with our goals and teaching principles. Our tests, especially listening ones, will have face validity as they will look like a listening test. Our tests will achieve content validity as the students will be tested based on what they were taught. On the other hand, practicality is also important in our case because both

students and the instructors already have a hectic schedule. Bearing this in our minds, our assessment can be considered practical as it is cost-effective, does not require too much time to administer, needs only the course instructor to administer and mark the test, and is easy to interpret. The only point where practicality may suffer is the required time taken to mark the portfolios and project assignments, but as this will be once in the semester, it can be considered tolerable and manageable.

### **Evaluation**

As Chiarelott notes (2006), the evaluation of a curriculum requires both summative and formative assessment strategies. Previous research pools a large number of quantitative (questionnaires, end-of-term evaluation sheets, students' test results) and qualitative (interviews, discussion notes, case studies, document analysis, classroom observation checklists) information into their dataset (Iranmehr et al., 2018; Öztürk, 2013; Salter-Dvorak, 2016). These sources are then triangulated to evaluate the functioning and effectiveness of a curriculum or syllabus. In the light of the aforementioned literature, the evaluation procedures within the scope of this curriculum renewal will be summative by nature and long term and make use of both qualitative and quantitative data collection tools. At the end of each term, the students will be provided with an evaluation form to evaluate the course they took. All the assessment tools employed during the delivery of the course (listening achievement test scores, portfolio grades, presentation results, reading test results) as well as the total course grades of the students will be considered while evaluating the amount and quality of learning. At the end of the first year of the course, both students (25% & high achievers, moderate ones, slow learners) and instructors will be interviewed to assess the quality of learning and instruction. At the end of second, third, and fourth years, the departmental instructors will be asked to evaluate the effectiveness of the course through a checklist and interviews. To reveal the strengths and weaknesses of the program and leverage the existing EAP curriculum and practices, we will eventually triangulate all these data and share the resulting picture with all the stakeholders, including administrative staff, curriculum unit, ELT instructors, department lecturers, and students.

## **LIMITATIONS**

A range of limitations may have affected the results and might exert some influence on its effectiveness in the future. Firstly, there were fewer returns from the instructors than expected prior to the study because only five instructors completed the questionnaire and agreed on the interviews. A more extensive participation may have produced more insightful and accurate information on the teachers' side. In the same vein, not as many returns as expected were obtained from the students in terms of questionnaire response rate; if the current figure of 33 could be increased over 50 or 60, sounder and more satisfactory results would emerge in the NA. The course currently suffers from a major limitation: it has a low-bearing credit. Thus, concrete efforts must be made to maximize the benefits of this course by increasing both its present hours and credit. One final note is on behalf of the students required to take this course. Admittedly, the requirements of the proposed course could be found more challenging than the current curriculum by the learners since this curriculum calls for greater amount of academic effort, but given all the future affordances, putting in all this effort will obviously be worthwhile.

## **CONCLUSION & SUGGESTIONS**

The driving force behind our curriculum renewal project was to capture the EAP needs of the undergraduate students and then propose a carefully-crafted, viable curriculum as an alternative to the current one cultivated as an EGP rather than an EAP course. The success of this proposed curriculum basically lies in the careful attention it pays to the NA stage. A detailed questionnaire made up of three sections (basic information about the students, a checklist with 37 items, an open-ended part) as well as semi-structured interviews with 10 open-ended questions yielded substantial and insightful information on both students' and teachers' needs and wants. Another triumph of the current work is the design of the inner circle components of the curriculum around this detailed NA and EA; goals, format, and assessment procedures were all shaped thoughtfully in the light of the student and teacher information. It should also be noted that careful thought was given to achieve alignment and consistency between all the constituents of the

curriculum to the greatest extent possible. The results of the NA as well as the chosen principles were the main drivers and determinants of the stated goals, formed content, prepared format, and proposed assessment procedures. On top of this, finding coursebooks (Oxford EAP and Cambridge English for Engineers) that fit well in with our needs, goals and principles, content and format, and assessment added to the strength of the project. Besides, this proposed curriculum is also informed by the relevant language research and theory. The adopted principles, content and sequence, format and presentation, monitoring and assessment were not designed based on previous intuitions about language teaching and learning, but rather on the academic information acknowledged in the ELT literature. In addition, we did not come up with an overcrowded syllabus which would pressurize learners and instructors in terms of time and content; rather, it is open to flexibility. As a final note, the courses geared towards improving the students' academic language skills are not offered as EGP but EAP courses both at the national and international level. The bottom line is that this suggested curriculum seems more functional and effective than the existing curriculum, as it is likely to motivate students towards using English in their departmental courses and future work/studies.

Future efforts to design an EAP curriculum in non-native contexts should definitely be informed by careful NA and EA and give careful thought to recent scientific research and emerging technologies. HE institutions should specify clear proficiency levels for their students admitted to EAP courses and adhere strictly to these targets before the delivery of the courses. Those who have yet to achieve the desired proficiency levels can be supported through instructor-supplemented materials or by opening wide the doors of self-study centers. Right instructional materials tailored to the learners' needs and a good textbook choice should not go unnoticed. In addition, the importance of EAP courses can also be more apparent in the eyes of students if such courses are granted more credit and hours. The administration of the right assessment procedures is of utmost importance to strike a good balance between instructional goals, activities, and testing.

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## GENİŞ ÖZET

**Amaç:** Bu çalışma, Karadeniz Teknik Üniversitesinde (KTÜ) İngilizce eğitim veren Elektrik-Elektronik Mühendisliği (EEM) öğrencilerinin akademik İngilizce ihtiyaçlarını tespit etmek amacıyla Nation ve Macalister'in (2010) müfredat oluşturma çerçevesi kullanılarak tasarlanmıştır. Böylece, mevcut İngilizce I-II müfredatıyla öğrencilerin ihtiyaçlarının, eksikliklerinin ve isteklerinin yeterince karşılanıp karşılanmadığının ortaya koyması hedeflenmektedir.

**Yöntem:** Çalışmaya başlamadan önce Orta Doğu Teknik Üniversitesinden etik kurul izni alınmıştır. Öğrencilerin ihtiyaçlarını analiz etmek ve bu analiz ışığında ilgili önerilerde bulunmak için KTÜ EEM bölümü birinci ve ikinci sınıf öğrencileri, bölümdeki öğretim üyeleri ve dersi veren İngilizce öğretimi okutmanı ile bir ihtiyaç analizi yapılmıştır. İhtiyaç analizinin yanı sıra, Nation ve Macalister (2010) tarafından önerilen bir kontrol listesi vasıtasıyla çevresel faktörlerle ilgili bir çevre analizi gerçekleştirilmiştir. Çalışma verileri ise kontrol listeleri, anketler ve yarı-yapılandırılmış mülakatlar yoluyla toplanmıştır. Katılımcıların araştırmaya dâhil edilmesinde kolayda örnekleme yöntemi kullanılmıştır. Öğrenci ve öğretim elemanlarına yönelik anketler Doruk'tan (2006) uyarlanmış olup Cronbach's Alpha güvenilirlik puanı  $\alpha = .94$  olarak hesaplanmıştır. Anketler ve kontrol listeleri, %100 İngilizce EEM programındaki 33 birinci ve ikinci sınıf öğrencisi, 5 öğretim üyesi ve 1 İngilizce okutmanı tarafından doldurulmuştur. Birinci sınıfa kayıtlı 5 öğrenci, %100 İngilizce EEM programında ders veren 5 öğretim üyesi ve 1 İngilizce okutmanı ile yarı-yapılandırılmış mülakatlar yapılmıştır. Nicel veriler SPSS Statistics 22 yazılım paket programında analiz edilirken, nitel veriler ise daha sonra yorumlanmak için kodlara, kategorilere ve temalara ayrılmıştır.

**Bulgular:** Yapılan değerlendirmelerde, öğrenciler İngilizce hazırlık sınıfında A1-B1 arasında değişen dil seviyelerinin, bölümde İngilizce anlatılan alan derslerinde yeterli olmadığı ortaya çıkmıştır. Ayrıca, öğrenciler, İngilizce I-II derslerinin düşük kredili olmasından ve bölümdeki diğer derslere daha fazla ağırlık vermek zorunda olduklarını hissettiklerinden İngilizce I-II derslerine yeterince zaman ayıramadıklarını bildirmişlerdir. Öğrenciler, bu dersin Genel İngilizce dersi olarak verilmesinin bölümdeki akademik ihtiyaçlarını karşılamada yetersiz kaldığını belirtip, onun yerine bu dersin Akademik Amaçlı İngilizce olarak verilmesini önermişlerdir. Akademik çalışmalarını ve gelecekteki kariyerlerini sürdürmek için yabancı dil konuşma becerisine ihtiyaç duyan öğrencilerin zayıf konuşma yeteneklerine sahip oldukları hem kendileri hem de akademisyenler tarafından vurgulanmıştır. Öğrencilerin %37'si konuşma becerilerini güçlendirmek için sohbet, münazara, soru-cevap etkinlikleri ve sunumlar gibi daha fazla konuşma etkinliğine tabi olmak istediklerini ifade etmişlerdir. Aynı şekilde, öğrencilerin konuşma becerilerini sorunlu bulan öğretim elemanlarının tamamı, öğrencilerin etkileşime girmekte ve derslere aktif olarak katılmakta isteksiz olduklarını belirtip, bunu da özgüven eksikliği, hata yapma korkusu ve utangaçlıkla bağdaştırmışlardır. Atıf yapılan bir diğer sorun ise öğrencilerin bölümleriyle ilgili yeterli teknik kelime bilgisine sahip olmamasıdır. Teknik kelimelere hâkim olamadıkları için bölüm derslerinin içeriğine hâkim olmada sorunlar

yaşadıklarını dile getirdiler ve İngilizce I-II derslerin terminolojik kelime öğretimine ağırlık vermesi gerektiği dile getirmiştir.

**Tartışma ve Sonuç:** Derslerin amaç, içerik ve sıralama, biçim ve sunum, izleme ve değerlendirme konularına ihtiyaç ve çevre analizi sonuçları ile dil öğretimi ve öğrenimi ilkeleri doğrultusunda karar verilmiştir. Öğrencilerin akademik İngilizceyi ve konuşma, dinleme, okuma, yazma ve çalışma becerileriyle ilgili alt becerileri kavramaları gerektiği ortaya konmuştur. Bu çerçevede, yeniden yapılandırılan dersin, öğrencilere kelime kazanımını kolaylaştırıcı materyaller sağlayan “içerik temelli” bir ders olmasını bekliyoruz. Ders konularının dizilişi, karmaşıklık sırasına göre ilerlemekte, yani karmaşık alt-beceriye odaklanmadan önce daha kolay alt-beceriyle yoğunlaşmaktadır. Bu projede, konu sıralaması açısından modüler bir yaklaşım benimsenmiştir. Dersler, her biri okuma, yazma, konuşma ve dinleme olarak dört bölüme ayrılan doğrusal olmayan birimlere ayrılmıştır. Her ünite kendi içinde bir bütündür, dört beceri ile ilgili etkinlikler içerir ve bunlar genellikle önceki modüllerdeki bilgilerin üstüne inşa edilmemektedir. İngilizce okutmanın yoğun ders programından ötürü zaman sıkıntısı olduğundan, İngilizce I-II dersleri için “Oxford EAP B1+” ve “Cambridge English for Engineering” gibi ders kitaplarının kullanılması önerilmiştir. Birinci yarıyıldaki İngilizce I için “Oxford EAP B1+”, ikinci yarıyıldaki İngilizce II için “Cambridge English for Engineering” kullanılması makul görülmüştür. Konuşma, 10 dakikalık sunumlarla, okuma ve dinleme aylık yapılacak olan başarı testleriyle, yazma becerileri portfolyo ve proje-temelli değerlendirme yöntemiyle ölçülecektir. Bu müfredat yenileme kapsamındaki ders değerlendirme işlemleri, doğası gereği özetleyici ve uzun vadeli olacaktır. Her dönem sonunda öğrencilere aldıkları dersi değerlendirmeleri için bir değerlendirme formu verilecektir. Tüm değerlendirme araçları ile öğrencilerin toplam ders notları, öğrenmenin miktar ve kalitesi değerlendirilirken dikkate alınacaktır.

## Appendix A:

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ  
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Sayı: 28620816 /

22 MART 2021

Konu : Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi : İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof. Dr. Ayşegül DALOĞLU/ Mevlüde ABDİOĞLU, Ceyhan ÖZKAL

"Mühendislik Öğrencilerine Yönelik Akademik Amaçlı İngilizce Dersi Müfredat Yenileme Çalışması" başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve 079-ODTU-2021 protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Dr.Öğretim Üyesi Ali Emre TURGUT  
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