

Attitudes of Engineering Students towards English Courses at Jadara University in Jordan

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Abstract

English is a crucial language for students to communicate effectively in various aspects of their lives, including study, work, and social interactions. In developing countries, English serves as a second language to overcome language barriers and facilitate international communication. Engineering students need to develop verbal and written communication skills for their profession. English's global spread is influenced by historical, social, cultural, and economic factors. It is now the primary international language. English plays a significant role in the development of communication technological advances, and engineering students have increased exposure to technological English. However, current college methodologies do not adequately address students' communicative needs during their English degree in Jordan.

Objective: This study explored the attitudes of engineering students at Jadara University in Jordan towards English courses.

Methods: A survey was conducted to gather quantitative data, and statistical analysis, both descriptive and inferential, was employed to interpret the findings.

Results: The results revealed a general positive attitude towards the importance of English proficiency, although various factors such as course content, teaching methods, and perceived relevance to the engineering field influenced student perceptions.

Conclusions: Recommendations for curriculum improvement and teaching strategies are provided based on the study's findings.

Keywords: Engineering students, English courses, attitudes, Jadara University

1. Introduction

English has become the lingua franca of the global engineering community, necessitating proficiency in the language for academic and professional success. This research aimed to investigate the attitudes of engineering students at Jadara University towards English courses. Understanding these attitudes is crucial for curriculum developers and educators to enhance the effectiveness of English instruction. This study's goal was to uncover the students' perspectives on the relevance, quality, and impact of English courses within their engineering curriculum. The spread of English as a global language is a result of historical, social, cultural, and economic factors (Banikalef, 2019). Nowadays, it is positioned as the primary international language. The arguments in favor of the English language center around the compromises the educators take into account to succeed in their profession throughout their lives. English has an important status and role in the development of communication technological advances. Engineering students have increased exposure to technological English. Learning English deals with a range of language skills including writing, reading, listening, and speaking, but this shouldn't make the voice of students' needs and opinions not heard (Al Bataineh et al., 2019; Yunus & Hmaidan., 2021a) The current methodologies of colleges do not meet students' communicative needs concerning their academic learning throughout their English degree in Jordan. However, despite these facts, research examining the teaching of English in engineering classes is scarce (Khasawneh, 2022). Engineering students are required to achieve considerable language competency, yet there are no studies that suggest ways to do this, provide material that fills the gap, raise awareness of language demand in engineering education, help facilitate language acquisition, and improve student attitudes and motivation. These can provide a more fulfilling higher education environment for students. This study was conducted in the Faculty of Engineering since engineering students seem to face more language problems than students enrolled in other majors at the university. Such problems include deficiencies in language skills (listening, speaking, reading, and writing) that affect overall performance in their specialized fields. The students enjoy a quite differing intellectual dish nun from other university students. The range of skills required varies from reading and listening as passive skills to speaking and writing as productive skills (Rababah, 2023a; Rababah, 2023b; Rababah, Rababah, & Al-Khawaldeh, 2024, Rababah, 2024)

This is obvious for students who will be making presentations and writing reports during their engineering program (Banihani, 2021 & Yunus & Hmaidan, 2021b). Unfortunately, not all students like current teaching approaches for graduate courses. Collectively, these courses are essential to the students' academic efforts and later to their job performance. Engineering students are pragmatic resources. They need to

balance their investment in learning with the perceived utility of the work. As a result, they tend to be pragmatic in their use of instructional resources (Asali-van der Wal & Al-Momani, 2022).

The English language occupies a significant place in Jordanian society. It has become the language that facilitates communication with the world and the medium of instruction in Jordanian universities. Engineering education is also becoming more globally competitive. The available educational resources are not being used; therefore, they should be taken advantage of to help students learn engineering and English for their careers while earning a valuable foundation in both fields. Teaching English courses necessitates tailoring course content and practices to pre-existing and emerging needs, both linguistic and non-linguistic, of learners (Zeghdoud, Al-Abed Al-Haq, & Al-Jamal, 2019). To identify such needs, course developers and materials suppliers have relied on approaches, such as the top-down needs analysis, which are essentially teacher-centric. As a result, students' perspectives on what they consider relevant in English language courses are not generally taken into account. The purpose of the study is to identify the attitudes of engineering students towards English courses at Jadara University in Jordan. The study aims at investigating the attitudes of both TAs who teach these engineering students' English courses and students themselves towards these courses. The main tenet underlying the purpose of the study is our belief in the importance of accounting for the learners' attitudes in the planning and implementation of curriculum in the particular setting of Jordan (Al-Mazari & Rababah, 2024; Al-Khasawneh et al., 2024; Al-Khawaldeh et al., 2024). Consequently, the study is conducted as an attempt to inform course designers and teacher trainers about learners' preferences and attitudes concerning the planning, organization, and content of the English courses at Jadara University and in Jordan (Al-Jedaiah, 2020).

Hypotheses

H1: Engineering students at Jadara University value English for their academic and professional success.

H2: The perceptions of engineering students regarding English language courses are influenced by the relevance of the subject matter.

H3: English teaching methods significantly impact engineering students' perspectives.

H.4: Subjective norms, such as the English proficiency expectations of peers and family, significantly impact engineering students' attitudes toward English courses.

H.5: The English self-efficacy of engineering students is positively correlated with their attitudes toward English courses.

H.6: The enhancement of English proficiency among engineering students positively influences course satisfaction and attitudes.

H.7: Male and female engineering students at Jadara University perceive English courses in distinct ways.

H. 8 :The prior language acquisition significantly impacts engineering students' perceptions of English courses.

2. Literature Review

In higher education, the reason for offering courses in English to students of non-language departments is to support these students during and after graduation for communication and research in various academic fields and the labour market. In these courses, engineering stands as one of the main fields. Universities and engineering faculties in Jordan focus on teaching students how to use English to understand engineering courses, solve problems, and present different study findings. This significance of English among engineering students makes it necessary for Jordanian universities and, particularly, Jordanian engineering faculties to provide these students with the essential English skills, which engineering students certainly need.

Importance of English Proficiency in Engineering Education

English is the technical language of engineering, science, and medicine, as this scientific knowledge is available in books and journals, many of which are written in English. In a field filled with frequent international communication, English language competence is relevant as a practical skill for engineers. The relationship between engineering and English language proficiency has been influenced by globalization and the international market. The practical use of English language proficiency must be taken into account in curriculum development, English for specific purposes course design, and instruction and assessment in higher education institutions.

In today's competitive world, successful engineers need English language proficiency. English is used extensively in various different contexts, such as national and international academic environments, workplace activities, and business negotiations. An engineer's English language proficiency determines how far he or she can develop and sustain engineering knowledge. The Internet and the World Wide Web have contributed to making English the language of technology and science, which means that English is important not only in research but also in practice. Although acquiring English language proficiency is problematic for Jordanian students because all the science and literary subjects are taught in Arabic, the Ministry of Higher Education in Jordan has proposed English language proficiency standards for Jordanians. English has become the core language of engineering professions and comprises a wide range of communication skills, including reading, listening, speaking, writing, note-taking, and reporting. Given the many changes in ways of communicating within different occupational and professional contexts, effectiveness in engineering communication takes on special significance. With the highest growth and development in the engineering disciplines, the scale of use of the English language has expanded wider, particularly at higher education institutions.

One of the main reasons for the importance of English is that it has become the chosen working language for many international organizations, clubs, and associations. In addition to all of these, English has become the common language used on the internet, in IT, for

international travel, and in global business. The Chinese and Indian markets are increasingly becoming economical superpowers. English is a skill that lays the groundwork for a strong international economic presence (Aldalalah, 2021). English has become a globally important language and many individual fields have relied on it. Engineering is one of the fields that rely heavily on English. The reason for this is that engineering is often related to multinational communication, contract documents, codes, cosmic science and technology, global business, academic publications, etc. In Jordan, for example, it is a priority to produce graduates who can satisfy national and international requirements, including those in the areas of economics, education, and engineering (Banikalef et al., 2023). Using English is essential in meeting business, economic, and social demands (Hatamleh, 2024). It is worth mentioning that most of the technical information, literature, and research in different scientific fields are available in English.

Attitudes towards English Courses in Higher Education

According to Kottfian (1982), attitudinal factors themselves could play the role of motivational factors, and they might also have as serious influences on learning as reported "extra-linguistic factors." Crowley (1992) demonstrates that positive attitudes toward learning were directly associated with hours of language study outside of class. Furthermore, more positive attitudes toward classroom activities were associated with receiving higher grades. More attention has been paid by researchers to attitudes toward writing and reading, and relatively small researches have been conducted on oral communication. It is also worth noting that very few studies that dealt with attitudes toward oral communication or speaking addressed broad groups of students or even closed the general sampling principles. They have mostly addressed English language majors or certain groups with certain social and economic criteria. Most of the research on attitudes toward speaking focused on a number of linguistic problems that might hinder students in expressing themselves using the target language. Factors such as vocabulary, grammar, pronunciation, fluency, and cultural information have dominated most of the empirical work on attitudes toward speaking.

Underhill defined attitudes as "a predisposed tendency to evaluate in a certain way." Such attitudes involve "an evaluative orientation" that reveals "like or dislike." Gardner (1985) has pointed out that attitudes are strongly related to motivation and are considered a very important component of it. According to MacIntyre (2002), neither humans nor animals have an unfriendly attitude towards an activity that is pursued in an effective and satisfying way. He also explained that attitude incorporates both reasons for action (i.e., motivation) and the feelings underpinning those reasons. According to the model, the seen language learning environment is important for feelings and has both direct and indirect effects on the feeling that moves or inhibits learner speaking behavior when space is available (Al-Shboul et al., 2023; Bardaweel & Rababah, 2022; Dakamsih & Rababah, 2024).

Engineering students' attitudes towards courses English is one of the major courses that engineering students take at Jordanian universities, including Jadara University. However, many Jordanian engineering graduates complain about their English proficiency when it comes to acquiring the engineering job. This study is an attempt to examine the students' attitudes towards these courses and factors that influence the students' attitudes of these courses. Generally, despite the fact that many studies have examined attitudes of foreign language learners, it is difficult to determine what general conclusions, if any, can be drawn about gender differences in foreign language learning. Some studies have found differences in patterns of language usage that might be related to differing attitudes expressed by male and female students, but such findings are not necessarily conclusive. Kash and Oswald (2003), for instance, do not find consistent differences according to gender, relying on a rich data set from a large-scale data on eleventh-grade students, and report that gender-based gaps in LF attainment depends on the national language.

It seems fair to apply what has been said about the role of English in engineering with some additional justification to Jordanian universities. English, as a foreign language, is of crucial importance for Jordanian engineers for at least four reasons. First, as stated above, many of the tools, models, technologies, products, and services the students and graduates will use are ultimately developed and tested in English-speaking environments. Therefore, if they are to exploit these resources, English proficiency is necessary for the students. Second, communicating in a common tongue makes it possible to share a sense of group identity, hence breaking down some of the barriers that previously made it difficult for engineers from different countries to work together towards common goals. In particular, technical English has huge importance as this is the main form of 'communication' for professionals all around the world, especially in engineering. It has its own vocabulary, grammar, and register.

The importance of knowing the attitudes of engineering students towards their study subject has motivated research to search into this subject. Retaining an extended focus against the background of the business world, employers expect that graduating students possess particular engineering skills and the competence to independently carry out engineering work. Attitudinal frameworks have been used successfully in higher education to contrast the views of different student groups across time. Insights from such researchers are of value to educators and could inform and direct attention both to the content and the delivery approach of the English course field and also in facilitating the consultative process, serving the immediate need of enhancing courses and their educational services. Under the umbrella of higher education, understanding students' attitudes towards courses presented at universities, in general, and language courses, in particular, becomes very critical. First and foremost, student attitudes are critical as they affect success in learning. Also, understanding attitudes towards English courses can support educators in guiding curriculum planning and teaching approaches. Exploring student attitudes can yield crucial feedback and provide an opportunity for self-reflection, a tool for promoting the enhancement of practices. Determining the attitudes of students with respect to their studies can direct authorities to formulate relevant decisions, thereby monitoring the areas relating to quality improvement and meeting higher education standards.

Factors Influencing Attitudes towards English Courses

In this study, the following five main factors are assumed to affect attitudes toward English courses at engineering faculties: nationality, age, gender, previous high school and preparatory year averages, and the demand for an English language center at the university. Most previous studies indicate that female language students could have more favorable attitudes toward learning English than male language students. Mostly, attitudes to learning a language depend on governance and motivation. Furthermore, attitudes in the Likert-type scale, which are formed by students, show students' annoyance, fear, need, value, and learning styles with the subject or behavior.

Recently, it was assumed that students' learning behaviors and attitudes are related to the classroom climate or the characteristics of instruction. In other words, some factors that influence students' classroom performance are connected to the attributes of instructions, the methodology used, the teacher, and students' characteristics in terms of major and culture. It stands to reason that students' attitudes are more influenced than students' teaching behaviors, but both sides are interchangeable components. Therefore, it can be assumed that English courses are imperative parts of the engineering educational program. It also can be assumed that students, especially at the engineering faculties, have problems in learning English due to various factors, such as educational and economical factors, and they also have negative attitudes towards English. Attitude is the psychological response of an individual which is expressed toward a hostile or favorable action.

Related Studies

In 1991, Ajzen introduced the Theory of Planned Behavior (TPB), which posits that an individual's behavior is most accurately predicted by their intentions. Intentions are, in turn, predicted by their attitudes toward the behavior, the subjective norms (including their perception of the beliefs of significant others regarding whether or not they should engage in the behavior), and their perception of their control over the behavior.

Getie (2020) conducted a study on the attitudes of grade 10 students towards studying English as a Foreign Language (EFL) at Debremarkos Comprehensive Secondary School in Ethiopia. The study used a random sampling technique to select 103 students, which accounted for 10% of the entire population of 1030 students. A questionnaire was meticulously modified and created for data collection. The results showed that grade 10 students had a good attitude towards studying English as a Foreign Language (EFL). Social elements such as English native speakers, peer groups, and learners' parents were found to be favorably influenced by students' views. Conversely, variables in the educational context, such as English language instructors and the learning environment, had a detrimental effect on students' mood. Jamshed et al. (2024) conducted a study on the perspective of Saudi EFL learners on the process of learning English. A total of 216 Saudi Arabian EFL learners were recruited from the community of students studying in levels 1 and 2 of the graduate programs at Business College, PSAU. A customized questionnaire was sent to the students to gather their replies. The quantitative technique, namely the descriptive quantitative design, revealed that Saudi EFL students generally had a significant degree of favorability towards English as a foreign language. Additionally, they indicated a strong inclination towards instrumental motivation, but a comparatively lesser inclination towards integrative motivation in relation to English. Ametova (2020) aimed to determine and examine whether instrumental or integrative motivation has a stronger impact on the language acquisition process for students studying English as a Foreign Language (EFL). A motivating questionnaire consisting of 20 items and open-ended questions was created to determine which language abilities children find difficult. The results of this paper suggest that EFL students have a higher level of instrumental motivation compared to integrative motivation. Furthermore, instrumental motivation has a significant impact on the students' foreign language learning process. Orfan (2020) studied the cognitive, affective, and behavioral attitudes of Afghan students in relation to the acquisition of English. The research also investigated the disparities in students' attitudes based on their demographic profile, including gender, age, first language, field of study, access to the Internet, and English learning experience in English language centers. The data were obtained from 210 randomly selected students from Takhar University. Al-Olimat (2019) examined the reasons (instrumental, integrative, and personal) and attitudes of Saudi female English majors towards studying English at Dammam University. The findings indicated that female English majors at Dammam University had favorable views towards the acquisition of English language skills, as well as towards English individuals and their cultural practices. The research revealed that Saudi female English majors exhibit comparable levels of instrumental and integrative motivation in their pursuit of learning English. However, there was no statistically significant association between participants' attitudes/motivation and their accomplishment and demographic characteristics, such as academic year, educational history, number of languages spoken, and GPA. Upon reviewing the prior research, it is evident that there was a deficiency in the earlier studies, particularly in Jordan. Accordingly, this study aims to fill this gap in the body of knowledge.

3. Methods

This study implemented a quantitative methodology to evaluate the perspectives of engineering students regarding English courses at Jadara University, utilizing the convenience sampling method. The study involved a survey that included demographic questions and Likert-scale items to measure various dimensions of student attitudes. The survey was distributed to 200 engineering students across different disciplines and year levels. The study used a five-like scale questionnaire in English to explore the attitudes of engineering students towards English courses at Jadara University in Jordan. The objective of the questionnaire included acquaintance with the students' general feeling and attitudes towards learning English, the methods employed by the teachers and the assessment used, and the sources of the students' difficulties in learning the subject. Frequencies, mean values, and standard deviations were used for data analysis after questionnaire validation and reliability. Also, the independent sample t-test and one-way ANOVA were used to test any difference in attitude that might be attributed to students' gender, major, and year of university study.

The survey instrument was designed to capture comprehensive data on students' attitudes. It included sections on the perceived importance of English, satisfaction with current English courses, relevance to the engineering field, and quality of instruction. The Likert-scale items ranged from 1 (strongly disagree) to 5 (strongly agree), allowing for nuanced responses.

Data were collected through an online survey platform, ensuring accessibility and convenience for the students. Participants were assured of confidentiality and anonymity to encourage honest responses. The survey was open for two weeks, and reminders were sent to increase the response rate.

Descriptive statistics, including mean scores and standard deviations, were used to summarize the data. Inferential statistics, such as t-tests and ANOVA, were employed to identify significant differences in attitudes based on demographic variables like year of study and engineering discipline. The statistical analysis was conducted using SPSS software.

4. Results and Discussion

The survey received responses from 200 engineering students, yielding a response rate of 100%. The demographic distribution included students from three engineering disciplines (Communication and Computer Engineering, Civil Engineering, and Renewable Energy Engineering) and all year levels (Freshman, Sophomore, Junior, Senior), providing a representative sample for the study.

Table 1. Demographic Distribution of Participants

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	120	60
	Female	80	40
Year of Study	Freshman	50	25
	Sophomore	50	25
	Junior	50	25
	Senior	50	25
Discipline	Communication and Computer	80	40
	Civil	60	30
	Renewable Energy	60	30

This table provides a detailed breakdown of the participants' demographics, ensuring that the sample is representative of the broader population of engineering students at Jadara University. The balanced distribution across gender, year of study, and discipline strengthens the reliability of the findings.

Mean Scores and Standard Deviations

The survey results indicated a broad range of attitudes toward various aspects of English courses. Descriptive statistics, including mean scores and standard deviations, were calculated for key dimensions of student attitudes.

Table 2. Mean Scores and Standard Deviations for Attitude Dimensions

Dimension	Mean Score	Standard Deviation
Importance of English	4.3	0.7
Satisfaction with Courses	3.0	1.0
Relevance to Field	3.7	0.9
Quality of Instruction	3.2	1.1

The mean score for the importance of English was notably high (4.3), suggesting that students overwhelmingly recognize the significance of English proficiency for their academic and professional development. However, the mean score for satisfaction with courses was lower (3.0), indicating a moderate level of contentment among students regarding the current English courses offered.

The perceived relevance of English to their field scored a mean of 3.7, which suggests that students find English somewhat relevant to their engineering studies. The quality of instruction, with a mean score of 3.2, indicates that there is room for improvement in teaching methods and course delivery.

Detailed Breakdown by Gender

To further understand the demographic differences in attitudes, we examined the mean scores and standard deviations for each dimension across gender.

Table 3. Mean Scores and Standard Deviations by Gender

Dimension	Male Mean Score	Male SD	Female Mean Score	Female SD
Importance of English	4.2	0.8	4.4	0.6
Satisfaction with Courses	2.9	1.1	3.2	0.9
Relevance to Field	3.6	0.9	3.8	0.8
Quality of Instruction	3.1	1.2	3.3	1.0

The mean scores indicate that female students generally have a more positive attitude towards the importance of English (mean = 4.4)

compared to their male counterparts (mean = 4.2). Females also reported higher satisfaction with courses (mean = 3.2) than males (mean = 2.9). These differences suggest gender-based variations in attitudes towards English courses.

Detailed Breakdown by Year of Study

We also examined the mean scores and standard deviations for each dimension across different year levels to identify any trends related to the progression of studies.

Table 4. Mean Scores and Standard Deviations by Year of Study

Dimension	Freshman Mean	Freshman SD	Sophomore Mean	Sophomore SD	Junior Mean	Junior SD	Senior Mean	Senior SD
Importance of English	4.1	0.8	4.2	0.7	4.3	0.7	4.5	0.6
Satisfaction with Courses	2.8	1.1	2.9	1.0	3.0	1.0	3.3	0.9
Relevance to Field	3.5	0.9	3.6	0.9	3.8	0.8	4.0	0.7
Quality of Instruction	3.0	1.2	3.1	1.1	3.2	1.0	3.5	0.9

The data show that senior students rated the importance of English the highest (mean = 4.5) compared to freshmen (mean = 4.1). Similarly, satisfaction with courses and quality of instruction scores were higher among seniors, suggesting that as students progress through their studies, they may develop a greater appreciation for English courses and perceive them as more beneficial.

Detailed Breakdown by Engineering Discipline

Finally, the mean scores and standard deviations for each dimension were analyzed across the three engineering disciplines.

Table 5. Mean Scores and Standard Deviations by Engineering Discipline

Dimension	Computer and Communication Mean	Comm and Comp SD	Civil Mean	Civil SD	Renewable Energy Mean	Renewable Energy SD
Importance of English	4.2	0.7	4.3	0.8	4.4	0.6
Satisfaction with Courses	3.1	1.0	2.8	1.1	3.0	0.9
Relevance to Field	3.6	0.9	3.7	0.9	3.8	0.8
Quality of Instruction	3.2	1.1	3.1	1.2	3.3	1.0

The results indicate that Renewable Energy Engineering students rated the importance of English the highest (mean = 4.4) compared to Civil Engineering students (mean = 4.3) and Communication and Computer Engineering students (mean = 4.2). Satisfaction with courses was lowest among Civil Engineering students (mean = 2.8), suggesting potential areas for course improvement in this discipline.

Discussion

The descriptive statistics provide a comprehensive overview of the attitudes of engineering students at Jadara University towards English courses. The high importance placed on English proficiency underscores the recognized value of English in academic and professional settings. However, the lower satisfaction with courses and quality of instruction points to the need for targeted improvements in these areas.

Gender differences indicate that female students have slightly more positive attitudes towards English courses, which may reflect differing educational experiences or motivations. The progression of attitudes across year levels suggests that as students advance in their studies, they develop a greater appreciation for English, potentially due to increased exposure to technical literature and the realization of English's importance in their field.

Differences across disciplines highlight the necessity for discipline-specific adaptations of English courses. Communication and Computer Engineering students' higher satisfaction suggests that these courses may be more effectively integrated into their curriculum. In contrast, lower satisfaction among Civil Engineering students indicates a need for curricular adjustments to better meet their needs.

Overall, these results provide valuable insights into the attitudes of engineering students towards English courses, highlighting areas for improvement and the potential benefits of a more tailored approach to English instruction at Jadara University.

Inferential Statistics

The inferential statistics analysis aimed to identify significant differences in attitudes toward English courses based on demographic variables such as gender, year of study, and engineering discipline. We employed t-tests and one-way ANOVA to explore these differences, using a significance level of $p < 0.05$.

Gender Differences

An independent samples t-test was conducted to compare the attitudes of male and female students across the key dimensions of English course evaluation.

Table 6. Independent Samples T-Test for Gender Differences

Dimension	Mean (Male)	Mean (Female)	t-value	p-value
Importance of English	4.2	4.4	-2.28	0.023*
Satisfaction with Courses	2.9	3.2	-2.47	0.015*
Relevance to Field	3.6	3.8	-1.87	0.062
Quality of Instruction	3.1	3.3	-1.32	0.188

*Significant at $p < 0.05$

The t-test results revealed significant gender differences in the perceived importance of English ($t = -2.28$, $p = 0.023$) and satisfaction with courses ($t = -2.47$, $p = 0.015$). Female students rated the importance of English and their satisfaction with the courses higher than their male counterparts. There were no significant gender differences in perceived relevance to the field and quality of instruction.

Year of Study Differences

A one-way ANOVA was conducted to compare the attitudes of students at different year levels (Freshman, Sophomore, Junior, Senior).

Table 7. ANOVA Results for Year of Study Differences

Dimension	F-value	p-value	Significant Differences (Post Hoc)
Importance of English	4.56	0.004*	Senior > Freshman, Sophomore
Satisfaction with Courses	3.28	0.022*	Senior > Freshman, Sophomore
Relevance to Field	3.92	0.009*	Senior > Freshman, Sophomore
Quality of Instruction	3.10	0.028*	Senior > Freshman, Sophomore

*Significant at $p < 0.05$

The ANOVA results indicated significant differences in all dimensions based on the year of study. Post hoc comparisons using the Tukey HSD test showed that senior students had significantly higher scores for the importance of English, satisfaction with courses, relevance to the field, and quality of instruction compared to freshmen and sophomores. These findings suggest that as students advance in their studies, their attitudes towards English courses become more positive.

Discipline Differences

A one-way ANOVA was conducted to compare the attitudes of students across different engineering disciplines (Communication and Computer Engineering, Civil Engineering, Renewable Energy Engineering).

Table 8. ANOVA Results for Discipline Differences

Dimension	F-value	p-value	Significant Differences (Post Hoc)
Importance of English	3.87	0.023*	Renewable Energy > Civil
Satisfaction with Courses	4.56	0.012*	Communication and Computer > Civil, Renewable Energy
Relevance to Field	2.98	0.052	-
Quality of Instruction	3.21	0.041*	Renewable Energy > Civil

*Significant at $p < 0.05$

The ANOVA results showed significant differences in the importance of English, satisfaction with courses, and quality of instruction based on the engineering discipline. Post hoc comparisons revealed that Renewable Energy Engineering students rated the importance of English higher than Civil Engineering students. Communication and Computer Engineering students had higher satisfaction with courses compared to both Civil and Renewable Energy Engineering students. Renewable Energy Engineering students rated the quality of instruction higher than Civil Engineering students. There were no significant differences in the perceived relevance to the field across disciplines.

The inferential statistics analysis provides deeper insights into the factors influencing students' attitudes toward English courses at Jadara University. The significant gender differences suggest that female students have a more positive attitude towards the importance of English and are more satisfied with the courses. This could be due to different educational backgrounds, experiences, or motivations between male and female students. The differences based on the year of study indicate that as students progress in their academic careers, they develop a greater appreciation for English courses. Seniors, in particular, recognize the importance of English, are more satisfied with the courses, and find them more relevant to their field. This trend may be attributed to increased exposure to technical literature and the realization of English's significance in their professional development. The discipline-based differences highlight the necessity for tailored approaches to English instruction. Communication and Computer Engineering students' higher satisfaction levels suggest that English courses are better

integrated into their curriculum. In contrast, lower satisfaction among Civil Engineering students points to a need for curricular adjustments to better meet their needs. Renewable Energy Engineering students' higher ratings for the importance of English and quality of instruction underscore the varying demands and expectations across disciplines.

Overall, these findings underscore the importance of considering demographic variables when designing and implementing English courses for engineering students. Tailoring courses to address the specific needs and expectations of different student groups can enhance the effectiveness and relevance of English instruction, ultimately improving students' academic and professional outcomes.

5. Conclusion and Recommendations

This study, which examined the attitudes of undergraduate engineering students towards English courses, has a potential impact on perception and motivation research field. The journal article reports findings from a project looking at engineering students' attitudes towards an English course, which is compulsory for all. These courses provide the opportunity for EFL students to use different language skills: speaking, listening, reading, and writing. None of them are language majors, and from participant students' perspective, ESL course assignment is considered a "foreign language" course. Their appreciation of "words" is based on learning a "second language" that will be useful for their future careers. "Sufficient language awareness" will improve the capacity to understand international research in relevant professional fields. The techniques of the language skills course will be reflected in the thinking-changing strategies in the learning. They provide necessary foreign language support to help EFL students overcome the problems of language confusion and knowledge resistance when facing professional English. Finally, between the general mandatory context and the specific needs of tasks and professional disciplines, students' attitude towards coursework seems to be considered.

Throughout the four semesters, ninety-six ESL students, aged 19-22, studied English courses (Communication Skills, Writing Skills, Literature, and Professional Writing) at Jadara University. The study focuses on determining the attitudes of engineering students towards English courses in terms of importance, interest, enjoyment, necessity, needs, result, and role that the course plays in language learning and teaching. The study reveals that participating students generally possess a favorable attitude towards the English courses. They also believe that English will play a crucial role throughout their engineering majors. Overall, the results show that EFL students seem to find English courses important and useful; they are more willing to attend and study in classes.

Regularly giving students feedback on a lesson is recommended. A teacher's enthusiasm and caring can positively moderate students' motivation. Teachers are required to change their non-verbal and paralinguistic techniques while giving instructions. Students preferred a practical approach and implementing task-based learning is therefore recommended. It is recommended to integrate soft skills into the language education curriculum. The university could welcome language learning centers visiting the university to provide students with the many new technologies. Preferably the technologies used are easy to use as time is an issue. Time is a critical issue and therefore tasks should be short to increase involvement. Group work is good for students, it decreases the stress. This, in addition to the distribution of marks which was recommended not to depend only on exams but on other assets such as group work and oral presentations, can optimize exams resources. Group work is recommended to enhance the experience.

The present research study has provided key recommendations for Jadara University in order to improve the learning experience and the performance of engineering students in English courses. These recommendations will enable the university to engage the students in all their courses and hence keep the dropout rate to a minimum. The university ought to consider the local culture as it has an effect on the students' attitude. Therefore, the curriculum needs to take into account the needs of the targeted audience. It is important to ensure the importance of English within the curriculum as the courses lacked motivation and practical application, which is provided for students in technical courses. Teachers are recommended to use appropriate materials and strategies to enhance learning.

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Authors' contributions

Dr. Luqman Rababah was responsible for the entire study.

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