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ATTITUDES OF BIOENGINEERING AND MECHANICAL ENGINEERING STUDENTS TOWARDS ENGLISH : A CASE OF KAFKAS UNIVERSITY

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ABSTRACT: English language teaching and learning has been among one of the most heated issues in Turkish educational system, the intended level hasn't been reached, though. In literature it is generally accepted that positive attitudes are important factors in language learning. In this respect, the aim of this study is to determine the attitudes of Bioengineering and Mechanical Engineering students towards English. In order to carry out the study an attitude scale prepared by Ambarlı-Kırkız (2010) was administered to 65 Mechanical engineering and 36 Bioengineering students studying at Kafkas University, Kars. For the data analysis, SPSS 20 program was used and for the assessment of the results independent Sample t-test and descriptive statistics were used. According to the result of the study, the majority of the participants had negative attitudes towards English. The results of the study showed that there was no significant difference between the attitudes of male students and female ones $t(247)=2,45, p>0,05$ and that there was no significant difference between the attitudes of Mechanical Engineering students and Bioengineering students in relation to their departments $t(99) =0,264, p> 0, 05$.

Key words:attitudes, bioengineering, mechanical engineering, Kafkas University, language learning.

INTRODUCTION

Background of the Study

In the language teaching and learning process, the success and failure of the learners have been the focus of the researchers for a long time. In some research success and failure in language learning, namely English, have been studied in relation to affective factors (Gardner, 1980; MacIntyre&Charos, 1996). These factors are acculturation, personality, ego, beliefs, emotion, motivation, and attitude. According to Noels, et.al., (2000) affective variables such as attitude, orientations, anxiety, and motivation are at least as important as language aptitude for predicting L2 achievement (cited in Darabad, 2013, p.117).

Some of the researchers in the field attempted to define attitudes (Crystal, 1997; Eveyik, 1999, and İnal, et al. , 2003) some focused on the relationship between on the attitudes and achievement or failure (Gardner, 1985; Brown, 1994; Starks &Paltridge, 1996; Lafaye and Tsuda, 2002; Csizér and Dörnyei, 2005; Kara, 2009; Kiptui and Mbugua, 2009; Fakeye, 2010, and Darabad, 2013).

For example Crystal (1997, p. 215) defines attitudes as the feelings people have about their own language or the languages of others. In general terms Eveyik (1999) defines attitude as the state of readiness to respond to a situation and an inclination to behave in a consistent manner towards an object. And also, İnal, et al. , (2003, p. 41) state that "attitude refers to our feelings and shapes our behaviors towards learning".

In another related study, Gardner (1985) stated that the learners' attitudes towards learning play a key role in enhancing and motivating them to learn that language. Besides, Brown (1994, p. 168) says that attitudes, like all aspects of the development of cognition and affect in human beings, develop early in childhood and are the result of parents' and peers' attitudes, contact with people who are different in any number of ways, and interacting affective factors in the human experience.

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According to Starks &Paltridge (1996) learning a language is closely related to the attitudes towards the languages (p.218) and this idea is supported by Csizér and Dörnyei (2005) as they maintain that attitude is an important factor in language learning.

Similarly, Kara (2009) suggests that positive attitudes lead to the demonstration of positive behavior towards fields of study with the participants being interested in courses determining to learn and study more, which is backed by a study carried out by Fakeye (2010) as he states that the matter of learner's attitude is accepted as one of the most important factors that impact on learning language

In another study, Kiptui and Mbugua (2009) determined that negative attitude towards English was the most effective and psychological factor causing poor performance in English. In parallel with the field research mentioned above, Darabad (2013) states that student's attitude is an integral part of learning and that it should, therefore, become an essential component of second language learning pedagogy (p.117).

Problem

Although so much effort and budget has been spent on language learning and teaching, the expected level cannot be reached.

Purpose of the Study

As the field study maintains, achievement or failure in language learning may stem from the positive or negative attitudes of the learners, the purpose of this study is to determine the attitudes of Bioengineering and Mechanical Engineering students towards English.

Research Questions

1. What are the attitudes of the students at Kafkas University, Faculty of Engineering and Architecture, in the departments of Mechanical engineering and Bioengineering towards English?
2. Is there any significant difference between Mechanical Engineering and Bioengineering Students in relation to attitudes towards English classes?
3. Is there any significant difference between First year and Second year students in relation to their attitudes towards English classes?
4. Is there a significant difference in the attitudes of students in relation to their gender?

METHODS

Participants

Subjects of the study were 65 Mechanical engineering and 36 Bioengineering students studying at Kafkas University, Kars.

Data Collection Instrument

In this study a survey method was used to determine the attitude of the students towards English. In order to collect the intended data, an attitude scale prepared by Ambarlı-Kırkız (2010) was used. Cronbach Alpha for the scale was 0,93. The attitude scale consisted of two parts. Part one (A), elicited demographic data related to the participants. Part two (B), containing 20 items of a 5-likert Type scale, and elicited information in relation to the students' attitudes towards English. 10 of the statements were positive attitude statements and 10 negative ones. During the evaluation process positive attitude statements were accepted as 5-4-3-2-1, whereas negative ones were as 1-2-3-4-5.

Data Collection Procedure

The survey started on 5th March 2015 and finished on 2nd April. Before the survey questionnaire was administered, the students' willingness as well as the school authorities consent was taken by the researcher, ensuring data anonymity and confidentiality. The survey was administered during the regular class hours. On an average, it took twenty minutes to complete the questionnaires. The data were analyzed using SPSS 20. The results of the analysis have been given in results and findings.

Data Analysis

For the data analysis SPSS 20 for windows was used and significance level was set as 0,05. For the statistics, descriptive statistics and independent simple t-test were used.

RESULTS and FINDINGS

Demographic data related with the participants genders, departments and classes have been given in Table 1.

Table 1. Genders, Departments and Classes of the Participants

Department	Gender		Class					
	F. (N) %	%	M.(N)		1 st Y. N		2 nd Y. N	
				%		%		%
Mechanical Engineering	14	21,5	51	78,5	40	61,5	25	38,5
Bioengineering	15	42,0	21	58,0	13	36,0	23	64,0
Total	29	27,0	72	73	53	52,0	48	48,0

Note: F= female, M=Male, 1st Y= First Year, 2nd Y= Second Year

As can be seen, in the study, there are 72 (73 %) male students and 29 (23 %) female students, 65 (65%), 36 (36 %), and 53 (52 %) of them are first year students and 48 (48 %) are second year students.

Answers to the Research Questions

Research Question 1: What are the attitudes of the students at Kafkas University, Faculty of Engineering and Architecture, in the departments of Mechanical engineering and Bioengineering towards English?

Table 2. Participants' Attitudes Towards English Classes

Attitude Towards English	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	f	%	f	%	F	%	f	%	f	%
1. I think English is boring.	37	36,6	31	30,7	15	14,9	7	6,9	11	10,9
2. I think English is more enjoyable than other classes.	22	21,8	28	27,7	12	11,9	25	24,8	13	12,9
3. English teacher's criticizing me makes me bored.	40	39,6	25	24,8	18	17,8	7	6,9	10	9,9
4. Even though I study hard, I get low marks in English class.	31	30,7	31	30,7	16	15,8	13	12,9	10	9,9
5. English class satisfies me.	21	20,8	20	19,8	18	17,8	20	19,8	18	17,8
6. As I forget the topics in English easily, I don't want study English.	18	17,8	24	23,8	19	18,8	20	19,8	18	17,8
7. As I believe English is beneficial for me, I like it .	37	36,6	28	27,7	18	17,8	10	9,9	7	6,9
8. As I have to study English, I study it	19	18,8	36	35,6	8	7,9	13	12,9	23	22,8
9. I like sharing the information I have learnt in English class with others.	14	13,9	26	25,7	13	12,9	33	32,7	14	13,9
10. I don't like the way English is taught.	21	20,8	33	32,7	16	15,8	9	8,9	18	17,8
11. When English class contains current information, I like it.	37	36,6	33	32,7	12	11,9	16	15,8	2	2,0
12. I have difficulty in understanding the topics in English.	18	17,8	32	31,7	21	20,8	19	18,8	10	9,9
13. My English teacher's friendly manners make me enjoy the class.	21	20,8	21	20,8	27	28	18	18	13	12,9
14. During the day when there is an English class, I don't want to go to school.	37	36,6	28	27,7	17	16,8	7	6,9	11	10,9
15. I like English as I have the ability to learn it.	20	19,8	24	23,8	23	22,8	18	17,8	15	14,9

16. I think English is nonsense, so we do not need it.	43	42,6	28	27,7	14	13,9	8	7,9	7	6,9
17. I love studying English.	21	20,8	18	17,8	30	29,7	17	16,8	13	12,9
18. English is not among the most important lessons for me.	23	22,8	31	30,7	23	22,8	23	22,8	15	14,9
19. I like English as it is easy and understandable.	19	18,8	22	21,8	28	27,7	19	18,8	12	11,9
20. I look forward to having English classes.	10	9,9	24	23,8	25	24,8	21	20,8	20	19,8

Table 2. shows that the majority of the participants have negative attitudes towards English as they strongly agree 37 (36,6%) and 31 (30,7%) agree that English is boring. Similarly they believe that even though they study hard, they get low marks in English classes as 31 (30,7%) strongly agree and 31 (30,7%) agree. Also, they are mostly of the opinion that English teacher's criticizing them makes them bored as 40 (39,6%) strongly agree and 25 (24,8%) agree.

However, 37 (36,6%) of the participants strongly agree and 33 (32,7%) agree that when English class contains current information, they like it.

On the other hand, 10 (9,9%) strongly agree and 24 (23,8%) disagree that they look forward to have English classes 10 (9,9%). Likewise, 19 (18,8%) of them strongly agree and 22 (21,8%) agree that they like English as it is easy and understandable.

Research Question 2: Is there any significant difference between Mechanical Engineering and Bioengineering students in relation to attitudes towards English Classes?

Table 3. Students' Departments And Their Attitudes Towards English Classes

Department	N	\bar{X}	S	t	sd	p
Mechanical Engineering	65	51,72	14,60	,264	99	,79
Bioengineering	36	50,91	14,88			

It is apparent in Table 3 that there isn't any significant difference between the attitudes of Mechanical Engineering students and Bioengineering students $t(99) = 0,264$, $p > 0,05$.

Research Question 3: Is there any significant difference between first year and second year students in relation to their attitudes towards English Classes?

Table 4. Students' Classes And Their Attitudes Towards English Classes

Class	N	\bar{X}	S	t	sd	p
First year	77	50,50	14,53			
Second year	24	54,41	14,86	-1,14	99	,25

It is clearly seen in Table 4, there isn't any significant difference between the attitudes of the first year students and second year students $t(99) = -1,14$, $p > 0,05$.

Research Question 4: Is there any significant difference in the attitudes of students in relation to their genders?

Table 5. Students' Genders And Their Attitudes Towards English Classes

Gender	N	\bar{X}	S	t	sd	p
Female	29	49,72	15,29	-,744	99	,45
Male	72	52,12	14,41			

It is apparent in Table 5, there isn't any significant difference between the attitudes of the female and male students $t(99) = -,744$, $p > 0,05$.

CONCLUSION AND DISCUSSION

In a study carried out by Abidin et. al (2012) in relation to the three aspects of attitudes such as cognitive, behavioral, and emotional, the participants showed negative attitudes towards learning English. Similarly,

Elkılıç et. al., (2010) in a study on the attitudes of Education Faculty Students towards Compulsory English Courses: The Case of Ağrı İbrahim Çeçen University found out that 54, 2% of the students had a negative attitude towards compulsory English courses, whereas 45, 8% of them had positive attitude. In a study carried out by Lafaye and Tsuda (2002) on Japanese students' studying at Tokai Gakuen University it was determined that two thirds of the 1st year and 2nd year students do not like studying English.

However in a study carried out in Iran on 40 medical students Soleimani and Hanafi (2013) found out that Iranian medical students held highly positive overall attitude regarding English language learning. In the same way a study by Alkaff (2013) on 47 female students at the English Language Institute (ELI) of King Abdulaziz University (KAU) in Jeddah, Saudi Arabia, showed that most students had a positive attitude towards learning English and that they tried to improve their English. In another study on 190 eighth grade students of a private primary school in Adana, Turkey, Karahan (2007) found out that much as the participants were exposed to English in a school environment more frequently than other students at public schools, they had only mildly positive attitudes.

The present study is in parallel with Abidin et. al (2012), Elkılıç et. al., and Lafaye and Tsuda (2002) as the majority of the participants have negative attitudes towards English.

As for the genders, Shoaib and Dornyei (2005) showed that female second language learners show more positive attitudes and performances compared with the male learners. And also Elkılıç et. al., (2010) in the same study discovered that there was a significant difference between the attitudes of male students and female ones on behalf of females. In another study, Soku, et al. (2011, p.22) determined that gender had a significant effect on students attitudes to the study of English and that especially female students had higher rates.

On the other hand, in Karahan's (2007) study male students had higher rates than those of females. However, in the current study, there isn't any significant difference between the attitudes of the female and male students.

Gardner and Smythe (1975) found that 13- through 18-year-old students' attitudes toward the French Canadian community became more positive when the students spent more time studying French. Similarly, Kraemer and Zizenwine (1989) found that South African students' attitude toward Hebrew, when enrolled in a Hebrew foreign language class, became less positive after grade nine. Tucker and Donato (2001) similarly found that students' attitudes toward learning Japanese increased from grades four to six, but dropped sharply in grade seven. However, in the present study there isn't any significant difference between the attitudes of the first year students and second year students.

The study also revealed that there is no significant difference between the attitudes of Mechanical Engineering students and Bioengineering students in relation to their departments.

RECOMMENDATIONS

1.As is clear from the results of the study, it is necessary to raise students' awareness toward English that English is not only used by native speakers but it is extensively used among second and foreign language speakers as communicative tools.

2.Teachers should bring authentic material to the class to make the lesson enjoyable.

3.English language teachers at the faculty of Engineering and Architecture, in the departments of bioengineering and mechanical engineering should encourage students to participate in the classroom activities.

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