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An investigation into EFL prep-class students' academic emotions[1]

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Abstract

This present study is an investigation into EFL prep-class students' academic emotions in learning and taking a test with reference to departments and gender. Academic emotions emerge when the student evaluates achievement related-situations such as studying course materials, taking an exam, doing homework or getting an exam score. In this study, academic emotions about learning and taking a test rather than class-related ones have been evaluated. Nine emotions in total - enjoyment, hope, pride, anger, anxiety, shame, hopelessness, boredom and relief - in learning and in taking a test were evaluated before, during and after parts of the Achievement Emotions Questionnaire (AEQ) prepared by Pekrun, Goetz and Perry (2005). 156 male and 59 female prep-class students of the School of Foreign Languages of Atatürk University in the academic year of 2011-2012 were investigated to find out probable differences of academic emotions in learning and taking a test in terms of departments and gender. The results of the study showed that there were relatively significant differences in the mean scores of male and female students. The study also revealed significant similarities and differences regarding the departments and there were significant linear relationships among the scores for academic emotions in learning and taking a test.

Keywords: Academic emotions; learning and taking a test; department and gender; EFL prep-class students

1. Introduction

Students experience a variety of emotions in academic settings that influence their perceptions and behavior. Results from studies by Pekrun, Goetz, Titz, and Perry (2002) show that academic emotions are significantly pertaining to the students' motivation, learning strategies, cognitive resources, self-regulation, and academic achievement, and their findings show that affective and cognitive research in education should be admitted to improve emotional diversity in academic settings by referring to various emotions experienced by students. Emotions can affect students' achievement as well as their interest, engagement, and personality development, in addition to influencing the social climate in courses and educational institutions (Pekrun, 2006).

[1] This study was taken from PhD thesis.

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In recent times, emotional experiences of students have been neglected in the context of learning and achievement. In the past ten years, however, there has been a tremendous increase in the attention paid to emotions particularly in an academic setting. According to Pekrun, Frenzel, Goetz and Perry (2007), academic emotions can be regarded as emotions concerning either achievement outcomes (e.g., anxiety, pride, shame linked to success and failure, etc.) or activities relevant to achievement and the learning process (e.g., enjoyment of learning, boredom experienced in reviewing online materials, anger at the task demands, etc.).

1.1. Literature review

Generally, academic emotions can be defined as emotions that are experienced in an academic setting and context. There are five situations related to the academic achievement suggested by Pekrun and his colleagues (2002). These are as follows: (a) attending class, (b) taking tests and exams, (c) studying or doing homework by oneself, (d) studying or doing homework in a learning group, and (e) other situations in which one is cognitively occupied with academic achievement (e.g. talking about an upcoming exam with a peer) (as cited in Goetz et al., 2003, p. 11).

The following schema takes the traditional criteria of valence (positive vs. negative) and activation (activating vs. deactivating) into consideration and classifies academic emotions according to these criteria. Whereas valence is deemed as a bipolar dimension (positive vs. negative), activation is made out as unipolar in nature, and shows the extent to which a given emotion is activating. Table 2.1 shows the corresponding 2 x 2 table in which academic emotions are defined (Kleine, Goetz, Pekrun& Hall, 2005).

Table 1. Classification of Academic Emotions

	Valence	
Activation	Positive	Negative
Activating	enjoyment	anxiety
	pride	anger
	hope	shame / fault
Deactivating	relief	boredom
	relaxation	hopelessness

With a view to investigating emotion, several recent, very useful approaches can be utilized with a process focus. For example, according to Scherer (2000), the emotion process can be defined as a "dynamic time course of constantly changing affective tuning of organisms as based on continuous evaluative monitoring of their environment" (p. 70). He proposed that in order to comprehend the process of emotion, researchers need to attempt to model emotions synchronically in a nonlinear dynamic system. In suggesting a dynamic systems approach, Scherer (2000) supplied a component process model of emotions that seeks to address both the "dynamic, continuously fluctuating nature of emotion processes and the existence of discrete language labels referring to steady states" (p. 75).

Academic emotion relates to a wide range of emotional experiences in compliance with learners' academic activities in the teaching and learning process as well as emotional experiences in such activities as classroom learning, assignment and examination taking. Academic emotion has close relations with motive and stimulus for achievements, and sense of self-efficacy. Therefore, good academic emotion is both beneficial to the development of students' cognitive activities and the establishment of their attitude towards positive learning, and conducive to the establishment of efficient teacher-student relations and to the development of learners' physique and mentality.

Pekrun (1992) pointed out that in his theory, called control-value theory of achievement emotions, specific emotions can be classified in accordance with two distinct dimensions: a positive/negative dimension and an activating/deactivating dimension. *Activating* emotions, such as enjoyment or anger, make it possible to stimulate physiological identity and have a tendency to result in students' taking positive action, as a result of enjoyment, or negative action, as a result of anger. Positive activating emotions can easily facilitate the learning and make it possible to enhance motivation and cognitive abilities of the learners.

Deactivating emotions such as relief or boredom result in decreased arousal and action, often in the form of cognitive or behavioral assets (Pekrun 1992, 2006). Positive deactivating emotions such as relief and relaxation can positively influence the students' academic performance and in turn the learners can feel motivated to learn the necessary subjects and so they make their brain free to seize any information fundamental for themselves. In the following paragraphs, some of the most important positive emotions are defined briefly.

Hope: It can be defined as a desire of some good, accompanied with an expectation of obtaining it, or a belief that it is obtainable; an expectation of something which is thought to be desirable; confidence; pleasing expectancy.

Enjoyment: The condition of enjoying anything; pleasure or satisfaction, as in the possession or occupancy of anything; possession and use; as, the enjoyment of an estate.

Relief: This word can be defined as the easing or alleviation of a burden or distress, such as pain or anxiety.

Negative activating emotions such as anxiety and anger are one of the most significant concepts which block the learning properly in academic learning and hinder the learning by interfering in the learning process. Among these emotions, anxiety comes to the front, which can be defined as an uncomfortable emotional mood in which one conceives danger, feels powerless and experiences tension in preparation for an expected bad situation.

Negative deactivating emotions can be considered as the prevention of student's performance and motivation which is essential for the participants to progress in the academic setting. Thus, negative emotions can be problematic in any sense and lead to the poor learning in the classroom.

In brief, it can be concluded that positive emotions – those that are activating in particular – have been found to predict higher academic performance, and negative emotions have been found to predict lower academic performance (Pekrun et al., 2009); thus, it was hypothesized that positive emotions would positively correlate with academic achievement and negative emotions would negatively correlate with academic achievement. In the following paragraph, some of the most important negative emotions are defined briefly.

Anxiety: It is a term which can be defined as a state of uneasiness and apprehension especially for future concerns.

Boredom: It is the state of being bored or tedium

Anger: it is a strong feeling of displeasure or hostility towards the others.

1.2. Research questions

The aim of this study is to investigate the academic emotions of EFL prep-class students at Atatürk University, Erzurum in order to figure out how the role of academic emotions in learning and taking a test influence the attitude of the students in terms of department and gender. Nine academic emotions in total - enjoyment, hope, pride, anger, anxiety, shame, hopelessness, boredom and relief - in learning and

taking a test were evaluated before, during and after parts of the Achievement Emotions Questionnaire (AEQ).

In the light of this theoretical background and the research objectives, the following research questions were formulated:

RQ1. Are EFL prep-class students' academic emotions in learning organized in a department - specific manner?

RQ2. Are EFL prep-class students' academic emotions in learning organized in a gender - specific manner?

RQ3. Are EFL prep-class students' academic emotions in taking a test organized in a department - specific manner?

RQ4. Are EFL prep-class students' academic emotions in taking a test organized in a gender - specific manner?

RQ5. What are the relationships of EFL prep-class students' academic emotions in learning and taking a test?

2. Method

The data of the study were gathered from prep-classes selected for this study and before, during and after parts of learning and taking a test were applied at a certain interval. The questionnaire was applied to the research group without giving any time limitation in order to create a relaxed atmosphere while responding. These parts are included in Achievement Emotions Questionnaire (AEQ) developed by Pekrun, Goetz and Perry in 2005. The study lasted almost a full term, which lasts 28 weeks in accordance with the regulations applied by School of Foreign Languages. At the beginning of this study, the students were informed about the objectives and importance of the study.

2.1. Participants

Participants were EFL students in the preparatory class of the School of Foreign Languages of Atatürk University in the 2011 – 2012 academic year. 215 students (156 males and 59 females) all voluntarily took part in the study and gave consent for data collection. They were selected from six different departments; 36% of the students study in the Department of Mechanical Engineering, 21% of them study in the Department of Chemical Engineering, 21% of them study in the Department of Electrical and Electronic Engineering, 14% of them study in the School of Tourism and Hotel Management, 7% of them study in the Department of Chemistry and 1% of them study in the Department of Civil Engineering.

2.2. Instrument

In order to collect data, Achievement Emotions Questionnaire (AEQ) was applied to the participants. As for the general key concepts, Achievement Emotions Questionnaire (AEQ) refers to activity emotions (enjoyment, boredom, and anger), prospective outcome emotions (hope, anxiety, and hopelessness), and retrospective outcome emotions (pride, relief, and shame). In terms of valence, the instrument measures both positive and negative emotions, and in terms of activation, it evaluates both activating and deactivating emotions. So, the AEQ makes up the four emotion categories consisting of the valence and activation dimensions: positive activating (enjoyment, hope, pride); positive deactivating (relief); negative activating (anger, anxiety, shame); and negative deactivating (hopelessness, boredom).

In this questionnaire, there are three sections; before, during and after in terms of both learning and taking a test. The items in the questionnaire were translated into Turkish in order to enable the students to understand the items properly. The purpose of the instrument is to collect data about academic emotions in learning and taking a test. This survey is intended to find out the type and frequency of academic emotions and also to figure out whether these vary with regard to learning and taking a test throughout before, during and after parts. It consists of 152 items, each of which is based on 5 degree-scales ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

2.3. Data analysis

The results were analyzed through SPSS 16 program using different statistical analyses; percentage, frequency, arithmetic mean, standard deviation, Kruskal Wallis analysis, student's t-test, Dunnett's T3 post-hoc test.

3. Results

3.1.1. Are EFL prep-class students' academic emotions in learning organized in a department - specific manner?

Goetz, Frenzel and Pekrun (2006) state that up to that time, empirical research on the department specificity of students' emotional experiences is lacking. However, there are several studies that provide indirect evidence in support of the domain specificity of academic anxiety (e.g., Everson, Tobias, Hartman, & Gourgey, 1993; Gottfried, 1982; Hembree, 1990). Despite this proliferation of research on academic emotions, few researchers have focused on the department specificity of students' emotional experiences. To test the assumption that there are relatively strong relations between academic emotions in different departments (e.g., Mechanical Engineering, Chemical Engineering, Electrical and Electronic Engineering, Civil Engineering, School of Tourism and Hotel Management and Chemistry), this study investigates six different departments in a given study. The present study focused specifically on EFL prep-class students' academic emotions in learning and taking a test with regards to department and gender.

3.1.2. Findings and comments whether scores for Academic Emotions differ Before, During and After Learning as to EFL prep-class students' field of study

Kruskal-Wallis test was used to determine if there is a difference among Academic Emotion scores of EFL prep-class students Before, During and After Learning as to their field of study, and the results are shown in Table 2.

Table 2. Findings on the scores of Academic Emotions in EFL prep-class students with respect to Department in Learning

	Department	N	Sequence Mean	Chi-square	P
Enjoyment Before Learning	Mechanical Engineering	78	105.15	3.610	0.607
	Chemical Engineering	44	99.99		
	Electrical and Electronic Engineering	46	124.49		
	Civil Engineering	3	88.00		
	Tourism and Hotel Management	30	103.90		
	Chemistry	14	107.96		

Hope Before Learning	Mechanical Engineering	78	108.49	5.430	0.366
	Chemical Engineering	44	114.84		
	Electrical and Electronic Engineering	46	97.79		
	Civil Engineering	3	113.33		
	Tourism and Hotel Management	30	122.50		
	Chemistry	14	85.07		
Anger Before Learning	Mechanical Engineering	78	99.58	4.912	0.427
	Chemical Engineering	44	110.34		
	Electrical and Electronic Engineering	46	113.57		
	Civil Engineering	3	115.83		
	Tourism and Hotel Management	30	107.25		
	Chemistry	14	129.21		
Anxiety Before Learning	Mechanical Engineering	78	99.29	5.831	0.323
	Chemical Engineering	44	108.85		
	Electrical and Electronic Engineering	46	110.07		
	Civil Engineering	3	86.67		
	Tourism and Hotel Management	30	114.78		
	Chemistry	14	137.07		
Shame Before Learning	Mechanical Engineering	78	104.38	9.576	0.088
	Chemical Engineering	44	108.28		
	Electrical and Electronic Engineering	46	124.68		
	Civil Engineering	3	42.50		
	Tourism and Hotel Management	30	93.35		
	Chemistry	14	117.86		
Hopelessness Before Learning	Mechanical Engineering	78	100.34	4.713	0.452
	Chemical Engineering	44	101.07		
	Electrical and Electronic Engineering	46	119.00		
	Civil Engineering	3	91.83		
	Tourism and Hotel Management	30	117.17		
	Chemistry	14	120.14		
Boredom Before Learning	Mechanical Engineering	78	107.40	6.182	0.289
	Chemical Engineering	44	105.16		
	Electrical and Electronic Engineering	46	121.23		
	Civil Engineering	3	52.33		
	Tourism and Hotel Management	30	95.25		
	Chemistry	14	116.04		
Enjoyment During Learning	Mechanical Engineering	78	110.92	4.950	0.422
	Chemical Engineering	44	99.02		
	Electrical and Electronic Engineering	46	119.52		
	Civil Engineering	3	89.50		
	Tourism and Hotel Management	30	108.65		
	Chemistry	14	84.68		

Hope During Learning	Mechanical Engineering	78	113.57		
	Chemical Engineering	44	84.63		
	Electrical and Electronic Engineering	46	130.22	21.125	0.001
	Civil Engineering	3	98.50		
	Tourism and Hotel Management	30	115.55		
	Chemistry	14	63.29		
Pride During Learning	Mechanical Engineering	78	114.93		
	Chemical Engineering	44	104.70		
	Electrical and Electronic Engineering	46	115.55	7.066	0.216
	Civil Engineering	3	43.00		
	Tourism and Hotel Management	30	97.98		
	Chemistry	14	90.32		
Anger During Learning	Mechanical Engineering	78	96.54		
	Chemical Engineering	44	111.64		
	Electrical and Electronic Engineering	46	119.99	5.966	0.310
	Civil Engineering	3	91.50		
	Tourism and Hotel Management	30	119.33		
	Chemistry	14	100.29		
Anxiety During Learning	Mechanical Engineering	78	93.83		
	Chemical Engineering	44	118.31		
	Electrical and Electronic Engineering	46	108.84	8.705	0.121
	Civil Engineering	3	151.83		
	Tourism and Hotel Management	30	114.27		
	Chemistry	14	128.96		
Shame During Learning	Mechanical Engineering	78	95.99		
	Chemical Engineering	44	114.30		
	Electrical and Electronic Engineering	46	105.50	7.296	0.200
	Civil Engineering	3	111.67		
	Tourism and Hotel Management	30	116.05		
	Chemistry	14	138.11		
Hopelessness During Learning	Mechanical Engineering	78	91.48		
	Chemical Engineering	44	84.98		
	Electrical and Electronic Engineering	46	93.00	1.046	0.959
	Civil Engineering	3	97.67		
	Tourism and Hotel Management	30	96.55		
	Chemistry	14	89.50		
Boredom During Learning	Mechanical Engineering	78	99.92	3.178	0.673

	Chemical Engineering	44	108.44		
	Electrical and Electronic Engineering	46	118.89		
	Civil Engineering	3	106.00		
	Tourism and Hotel Management	30	114.47		
	Chemistry	14	102.43		
Enjoyment After Learning	Mechanical Engineering	78	114.29	3.378	0.642
	Chemical Engineering	44	99.03		
	Electrical and Electronic Engineering	46	108.66		
	Civil Engineering	3	67.67		
	Tourism and Hotel Management	30	104.22		
	Chemistry	14	115.68		
Pride After Learning	Mechanical Engineering	78	107.74	13.924	0.016
	Chemical Engineering	44	107.45		
	Electrical and Electronic Engineering	46	127.86		
	Civil Engineering	3	22.17		
	Tourism and Hotel Management	30	88.70		
	Chemistry	14	105.64		
Anger After Learning	Mechanical Engineering	78	101.97	5.386	0.371
	Chemical Engineering	44	117.99		
	Electrical and Electronic Engineering	46	110.91		
	Civil Engineering	3	52.33		
	Tourism and Hotel Management	30	104.40		
	Chemistry	14	120.25		
Anxiety After Learning	Mechanical Engineering	78	93.67	10.187	0.070
	Chemical Engineering	44	128.16		
	Electrical and Electronic Engineering	46	114.58		
	Civil Engineering	3	103.83		
	Tourism and Hotel Management	30	101.62		
	Chemistry	14	117.43		
Shame After Learning	Mechanical Engineering	78	95.93	5.309	0.379
	Chemical Engineering	44	112.89		
	Electrical and Electronic Engineering	46	114.05		
	Civil Engineering	3	113.50		
	Tourism and Hotel Management	30	113.43		
	Chemistry	14	127.18		
Hopelessness After Learning	Mechanical Engineering	78	100.43	5.485	0.360
	Chemical Engineering	44	114.76		

Electrical and Electronic Engineering	46	116.50
Civil Engineering	3	76.00
Tourism and Hotel Management	30	96.58
Chemistry	14	125.18

The table demonstrates that the chi-square values related to "Hope" During Learning and "Pride" After Learning are statistically significant as to students' field of study ($p<0.05$) whereas the chi-square values related to the differences among other Academic Emotions are not statistically significant ($p>0.05$). These findings have indicated that there is a difference between "Hope" During Learning and "Pride" After Learning among students as to their field of study. Dunnett's T3 Post-Hoc test was used to reveal which departments caused that difference.

The Post Hoc test results show that the differences are statistically significant among students studying Electrical and Electronic Engineering and the ones studying Chemical Engineering, Civil Engineering and Chemistry with regard to "Hope" During Learning ($p<0.05$). "Hope" During Learning is much higher among students studying Electrical and Electronic Engineering than students studying Chemical Engineering, Civil Engineering and Chemistry.

The differences are statistically significant among students studying Civil Engineering and the ones studying Mechanical Engineering, Chemical Engineering and Electrical and Electronic Engineering with regard to "Pride" After Learning ($p<0.05$). "Pride" After Learning is much lower in students studying Civil Engineering than students studying Mechanical Engineering, Chemical Engineering and Electrical and Electronic Engineering.

3.2. Are EFL prep-class students' academic emotions in learning organized in a gender - specific manner?

The degree to which men and women differ in their expression of their emotions of learning has received relatively little attention in empirical research. The present study focused specifically on EFL prep-class students' academic emotions related to gender, which is one of the variables of the study.

3.2.1. Findings and comments if there is a difference among scores of Academic Emotions in EFL prep-class students by gender, Before, During and After Learning

In data analysis, t-test was used to determine if there is a difference among scores of Academic Emotions for EFL prep-class by gender, Before, During and After Learning and the results are shown in Table 3.

Table 3. Findings on the scores of Academic Emotions in EFL prep-class students by gender, Before, During and After Learning

	Gender	N	$\overline{X}$	S.s.	t	P
Enjoyment Before Learning	Male	156	2.74	1.13	0.971	0.333
	Female	59	2.58	0.97		
Hope Before Learning	Male	156	3.18	0.57	-0.019	0.985
	Female	59	3.18	0.60		
Anger Before Learning	Male	156	2.38	0.72	-0.289	0.773
	Female	59	2.42	0.86		
Anxiety Before Learning	Male	156	2.40	0.81	-0.811	0.418
	Female	59	2.50	0.96		

Shame Before Learning	Male	156	2.87	1.03	1.463	0.145
	Female	59	2.63	1.16		
Hopelessness Before Learning	Male	156	2.33	0.89	-0.122	0.903
	Female	59	2.35	1.03		
Boredom Before Learning	Male	156	2.41	0.70	1.697	0.091
	Female	59	2.21	0.86		
Enjoyment During Learning	Male	156	2.51	0.51	2.966	0.003
	Female	59	2.27	0.55		
Hope During Learning	Male	156	1.87	0.71	1.864	0.064
	Female	59	1.67	0.69		
Pride During Learning	Male	156	2.15	0.70	3.027	0.003
	Female	59	1.83	0.63		
Anger During Learning	Male	156	2.40	0.80	-0.191	0.848
	Female	59	2.43	0.93		
Anxiety During Learning	Male	156	2.78	0.67	-3.385	0.001
	Female	59	3.14	0.72		
Shame During Learning	Male	156	2.41	0.70	-2.917	0.004
	Female	58	2.76	0.93		
Hopelessness During Learning	Male	127	2.44	0.70	-0.538	0.591
	Female	54	2.50	0.76		
Boredom During Learning	Male	156	2.57	0.65	1.360	0.175
	Female	59	2.43	0.72		
Enjoyment After Learning	Male	156	2.28	0.70	2.199	0.029
	Female	59	2.05	0.65		
Pride After Learning	Male	156	2.39	0.93	3.218	0.001
	Female	59	1.97	0.68		
Anger After Learning	Male	156	2.36	1.12	0.209	0.835
	Female	59	2.32	1.24		
Anxiety After Learning	Male	156	2.98	0.94	-0.923	0.357
	Female	59	3.11	0.94		
Shame After Learning	Male	156	2.44	0.86	-0.163	0.870
	Female	59	2.46	0.91		
Hopelessness After Learning	Male	155	2.39	0.87	0.337	0.736
	Female	59	2.34	0.78		

The table demonstrates that the t-values are statistically significant ($p<0.05$) for male and female students regarding the differences between the scores of "Enjoyment", "Pride", "Anxiety" and "Shame" During Learning, and "Enjoyment" and "Pride" After Learning whereas the t-values for all other Academic Emotions are not statistically significant ($p>0.05$).

All these findings have demonstrated that there are differences among male and female students with regards to "Enjoyment", "Pride", "Anxiety" and "Shame" During Learning, and "Enjoyment" and "Pride" After Learning whereas there are no differences among other Academic Emotions.

The table also shows that the arithmetic mean among male students regarding "Enjoyment" and "Pride" both During Learning and After Learning is significantly higher than that for female students.

Furthermore, the table clearly presents that the arithmetic mean among female students regarding "Anxiety" and "Shame" During Learning is significantly higher than that of male students.

As a result, it can be assumed that "Enjoyment" and "Pride" both During and After Learning is significantly higher among male students than female students whereas "Anxiety" and "Shame" is significantly higher among female students than male students.

3.3. Are EFL prep-class students' academic emotions in taking a test organized in a department - specific manner?

3.3.1. Findings and comments whether scores for Academic Emotions differ Before, During and After Taking a Test as to EFL prep-class students' field of study

Kruskal-Wallis test was used to determine if there is a difference among scores of Academic Emotions Before, During and After Taking a Test in EFL prep-class as to their field of study, and the results are shown in Table 4.

Table 4. Findings on the scores of Academic Emotions in EFL prep-class students with respect to Department in Taking a Test

	Department	N	Sequence Mean	Chi-square	P
Enjoyment Before Taking a Test	Mechanical Engineering	78	109.54	4.139	0.530
	Chemical Engineering	44	101.61		
	Electrical and Electronic Engineering	46	121.35		
	Civil Engineering	3	78.50		
	Tourism and Hotel Management	30	99.08		
	Chemistry	14	101.07		
Hope Before Taking a Test	Mechanical Engineering	78	106.23	14.512	0.013
	Chemical Engineering	44	95.74		
	Electrical and Electronic Engineering	46	131.85		
	Civil Engineering	3	22.83		
	Tourism and Hotel Management	30	106.33		
	Chemistry	14	99.86		
Anger Before Taking a Test	Mechanical Engineering	78	94.08	13.053	0.023
	Chemical Engineering	44	120.99		
	Electrical and Electronic Engineering	46	113.00		
	Civil Engineering	3	66.50		
	Tourism and Hotel Management	30	104.12		
	Chemistry	14	145.50		
Pride Before Taking a Test	Mechanical Engineering	78	111.88	4.372	0.497
	Chemical Engineering	44	94.49		
	Electrical and Electronic Engineering	46	116.85		
	Civil Engineering	3	77.83		
	Tourism and Hotel Management	30	107.52		
	Chemistry	14	107.29		

Anxiety Before Taking a Test	Mechanical Engineering	78	95.83	5.793	0.327
	Chemical Engineering	44	113.39		
	Electrical and Electronic Engineering	46	110.65		
	Civil Engineering	3	141.17		
	Tourism and Hotel Management	30	117.58		
	Chemistry	14	122.54		
Shame Before Taking a Test	Mechanical Engineering	78	105.85	4.498	0.480
	Chemical Engineering	44	109.59		
	Electrical and Electronic Engineering	46	97.01		
	Civil Engineering	3	135.17		
	Tourism and Hotel Management	30	115.47		
	Chemistry	14	129.29		
Hopelessness Before Taking a Test	Mechanical Engineering	78	96.01	7.463	0.188
	Chemical Engineering	44	111.98		
	Electrical and Electronic Engineering	46	119.22		
	Civil Engineering	3	58.33		
	Tourism and Hotel Management	30	116.15		
	Chemistry	14	118.61		
Enjoyment During Taking a Test	Mechanical Engineering	78	108.20	2.848	0.723
	Chemical Engineering	44	101.55		
	Electrical and Electronic Engineering	46	119.23		
	Civil Engineering	3	121.67		
	Tourism and Hotel Management	30	104.15		
	Chemistry	14	95.61		
Hope During Taking a Test	Mechanical Engineering	78	112.60	7.230	0.204
	Chemical Engineering	44	94.05		
	Electrical and Electronic Engineering	46	114.45		
	Civil Engineering	3	39.67		
	Tourism and Hotel Management	30	111.95		
	Chemistry	14	111.21		
Pride During Taking a Test	Mechanical Engineering	78	108.99	3.264	0.659
	Chemical Engineering	44	99.34		
	Electrical and Electronic Engineering	46	114.88		
	Civil Engineering	3	75.17		
	Tourism and Hotel Management	30	115.83		
	Chemistry	14	97.36		
	Mechanical Engineering	78	97.47		

Anger During Taking a Test	Chemical Engineering	44	108.63	5.108	0.403
	Electrical and Electronic Engineering	46	114.85		
	Civil Engineering	3	90.33		
	Tourism and Hotel Management	30	123.42		
	Chemistry	14	112.93		
Anxiety During Taking a Test	Mechanical Engineering	78	93.93	7.161	0.209
	Chemical Engineering	44	113.72		
	Electrical and Electronic Engineering	46	111.74		
	Civil Engineering	3	127.50		
	Tourism and Hotel Management	30	120.17		
	Chemistry	14	125.89		
Shame During Taking a Test	Mechanical Engineering	78	95.55	5.260	0.385
	Chemical Engineering	44	111.50		
	Electrical and Electronic Engineering	46	117.59		
	Civil Engineering	3	110.00		
	Tourism and Hotel Management	30	117.98		
	Chemistry	14	113.04		
Hopelessness During Taking a Test	Mechanical Engineering	78	91.12	11.520	0.042
	Chemical Engineering	44	110.86		
	Electrical and Electronic Engineering	46	118.74		
	Civil Engineering	3	102.50		
	Tourism and Hotel Management	30	131.35		
	Chemistry	14	108.93		
Enjoyment After Taking a Test	Mechanical Engineering	78	100.29	8.010	0.156
	Chemical Engineering	44	114.60		
	Electrical and Electronic Engineering	46	120.04		
	Civil Engineering	3	35.67		
	Tourism and Hotel Management	30	104.30		
	Chemistry	14	114.07		
Pride After Taking a Test	Mechanical Engineering	78	109.55	6.024	0.304
	Chemical Engineering	44	102.31		
	Electrical and Electronic Engineering	46	118.13		
	Civil Engineering	3	35.50		
	Tourism and Hotel Management	30	102.52		
	Chemistry	14	111.25		
Anger After Taking a Test	Mechanical Engineering	78	100.58	2.817	0.728
	Chemical Engineering	44	105.09		
	Electrical and Electronic Engineering	46	113.92		

	Civil Engineering	3	110.67		
	Tourism and Hotel Management	30	115.62		
	Chemistry	14	122.14		
Shame After Taking a Test	Mechanical Engineering	78	102.97	3.694	0.594
	Chemical Engineering	44	101.72		
	Electrical and Electronic Engineering	46	121.71		
	Civil Engineering	3	85.17		
	Tourism and Hotel Management	30	110.35		
	Chemistry	14	110.61		
Relief After Taking a Test	Mechanical Engineering	78	113.13	13.877	0.016
	Chemical Engineering	44	103.08		
	Electrical and Electronic Engineering	46	117.37		
	Civil Engineering	3	3.83		
	Tourism and Hotel Management	30	90.03		
	Chemistry	14	124.89		

The table demonstrates that the chi-square values are statistically significant related to "Hope", "Anger" Before Taking a Test, "Hopelessness" During a Test and "Relief" After Taking a Test as to the field of study ($p<0.05$). However, the chi-square values are not statistically significant related to the differences among other Academic Emotions ($p>0.05$). These findings have demonstrated that there are differences with respect to "Hope", "Anger" and Before Taking a Test, "Hopelessness" During a Test and "Relief" After Taking a Test as to the field of study. Dunnett's T3 Post-Hoc test was used to yield which departments caused that difference.

The Post-Hoc test results demonstrate that the differences with respect to "Hope" Before Taking a Test are statistically significant among these groups of students studying Mechanical Engineering, Civil Engineering and Electrical and Electronic Engineering; Civil Engineering and Mechanical Engineering; and Chemical Engineering, Chemistry and Electrical and Electronic Engineering ($p<0.05$). Moreover, "Hope" Before Taking a Test is much higher among students studying Electrical and Electronic Engineering than students studying Civil Engineering, Mechanical Engineering, Chemical Engineering and Chemistry. Additionally, it is higher among students studying Mechanical Engineering than students studying Civil Engineering.

The Post Hoc test results demonstrate that the differences with respect to "Anger" Before Taking a Test are statistically significant ($p<0.05$) among students studying Chemistry and students studying Mechanical Engineering, Civil Engineering and Tourism. "Anger" Before Taking a Test is much higher among students studying Chemistry than students studying Mechanical Engineering, Civil Engineering and Tourism.

The Post Hoc test results show that the differences, with respect to "Hopelessness" During Taking a Test, are statistically significant ($p<0.05$) among the students studying Mechanical Engineering, and students studying Electrical and Electronic Engineering and Tourism. "Hopelessness" During Taking a Test among students studying Mechanical Engineering is much lower than students studying Electrical and Electronic Engineering and Tourism.

The Post Hoc test results indicate that the differences, with respect to "Relief" During Taking a Test, are statistically significant ($p<0.05$) among students studying Civil Engineering, and students studying

Electrical and Electronic Engineering, Mechanical Engineering, Chemistry and Tourism. "Relief" During Taking a Test is much lower among Civil Engineering students than students studying Mechanical Engineering, Electrical and Electronic Engineering, Chemical Engineering, Chemistry and Tourism.

3.4. Are EFL prep-class students' academic emotions in taking a test organized in a gender - specific manner?

3.4.1. Findings and comments if there is a difference among scores of Academic Emotions in EFL prep-class students by gender, Before, During and After Taking a Test

In data analysis, t-test was used to determine if there is a difference among scores of Academic Emotions for EFL prep-class by gender, Before, During and After Learning and the results are shown in Table 5.

Table 5. Findings on the scores of Academic Emotions in EFL prep-class students by gender, Before, During and After Taking a Test

	Gender	N	$\overline{X}$	S.s.	T	P
Enjoyment Before Taking a Test	Male	156	2.85	0.58	1.259	0.210
	Female	59	2.72	0.84		
Hope Before Taking a Test	Male	156	2.61	0.62	1.076	0.283
	Female	59	2.51	0.69		
Anger Before Taking a Test	Male	156	3.04	0.82	-1.430	0.154
	Female	59	3.23	0.90		
Pride Before Taking a Test	Male	156	2.99	0.99	1.726	0.086
	Female	59	2.73	1.05		
Anxiety Before Taking a Test	Male	156	2.76	0.60	-2.702	0.007
	Female	59	3.02	0.70		
Shame Before Taking a Test	Male	156	2.87	1.13	-0.656	0.513
	Female	59	2.98	1.06		
Hopelessness Before Taking a Test	Male	156	2.38	0.75	-0.524	0.601
	Female	59	2.44	0.85		
Enjoyment During Taking a Test	Male	156	2.87	0.68	1.024	0.307
	Female	59	2.76	0.76		
Hope During Taking a Test	Male	156	2.35	0.75	1.202	0.231
	Female	59	2.21	0.75		
Pride During Taking a Test	Male	156	2.54	0.89	1.785	0.076
	Female	59	2.31	0.74		
Anger During Taking a Test	Male	156	2.70	0.95	-1.132	0.259
	Female	59	2.86	0.90		
Anxiety During Taking a Test	Male	156	2.82	0.73	-3.643	0.000
	Female	59	3.24	0.79		
Shame During Taking a Test	Male	156	2.14	0.77	-1.311	0.191
	Female	59	2.31	0.94		
Hopelessness During Taking a Test	Male	156	2.48	0.69	-1.618	0.107
	Female	59	2.66	0.80		
Enjoyment After Taking a Test	Male	156	2.40	0.80	-0.802	0.423
	Female	59	2.50	0.74		
Pride After Taking a Test	Male	156	2.75	0.73	1.256	0.210
	Female	59	2.62	0.51		

Anger After Taking a Test	Male	156	2.65	0.84	0.342	0.732
	Female	59	2.60	0.76		
Shame After Taking a Test	Male	156	2.38	0.89	-0.407	0.685
	Female	59	2.44	0.94		
Relief After Taking a Test	Male	156	2.48	0.70	1.871	0.063
	Female	59	2.28	0.76		

The table demonstrates that the t-values are statistically significant regarding the differences among the scores of male and female students with respect to "Anxiety" Before and During Taking a Test ($p<0.05$) whereas the t-values for all other Academic Emotions are not statistically significant ($p>0.05$).

These findings have indicated that there are differences among the scores of male and female students with respect to "Anxiety" Before and During Taking a Test whereas there are no differences among them with respect to the other Academic Emotions.

The table shows that the arithmetic mean for "Anxiety" both Before Taking a Test and During Taking a Test is much higher in female students than in male students.

As a result, it can be assumed that "Anxiety" both Before Taking a Test and During Taking a Test is much higher in female students than in male students.

3.5. What are the relationships between EFL prep-class students' learning and taking a test academic emotion?

3.5.1. Findings on the relationship between Learning Academic Emotions and Taking a Test Academic Emotions in EFL prep-class students Before, During and After

The relationship between learning and taking a test in the course before, during and after is shown in Table 6.

Table 6. Findings about the relationship between learning and taking a test in total score

Learning	Taking a Test	r	p
Before Learning (Total)	Before Taking a Test (Total)	0.745	0.000
During Learning (Total)	During Taking a Test(Total)	0.747	0.000
After Learning (Total)	After Taking a Test (Total)	1.000	0.000

The correlation between the total score before learning and that before taking a test was $r=0.745$ and found to be statistically significant ($p<0.05$); the correlation between the total score during learning and that during taking a test was $r=0.747$ and found to be statistically significant ($p<0.05$); and the correlation between the total score after learning and that after taking a test was $r=1.000$ and found to be statistically significant ($p<0.05$). All these findings demonstrated that there were significant linear relationships between the scores before learning and before taking a test, during learning and during taking a test, and after learning and after taking a test. Consequently, as the score before, during and after learning and taking a test increases, so does the score before, during and after learning and taking a test.

Table 7. Findings about the relationship between before learning and before taking a test in terms of academic emotions

Learning	Taking a Test	r	p
Enjoyment Before Learning	Enjoyment Before Taking a Test	0.538	0.000
Hope Before Learning	Hope Before Taking a Test	0.111	0.105
Anger Before Learning	Anger Before Taking a Test	0.345	0.000
Anxiety Before Learning	Anxiety Before Taking a Test	0.419	0.000
Shame Before Learning	Shame Before Taking a Test	0.145	0.033
Hopelessness Before Learning	Hopelessness Before Taking a Test	0.691	0.000

The correlation between the total score for Enjoyment Before Learning and that for Enjoyment Before Taking a Test was r=0.538 and found to be statistically significant ($p<0.05$) whereas the correlation between the total score for Hope Before Learning and that for Hope Before Taking a Test was r=0.111 and was not found to be statistically significant ($p>0.05$). Other findings are as follows: the correlation between the total score for Anger Before Learning and that for Anger Before Taking a Test was r=0.345 and found to be statistically significant ($p<0.05$); the correlation between the total score for Anxiety Before Learning and that for Anxiety Before Taking a Test was r=0.419 and found to be statistically significant($p<0.05$); the correlation between the total score for Shame Before Learning and that for Shame Before Taking a Test was r=0.145 and found to be statistically significant($p<0.05$); and finally, the correlation between the total score for Hopelessness Before Learning and that for Hopelessness Before Taking a Test was r=0.691 and found to be statistically significant ($p<0.05$).

All these findings demonstrate that there are significant linear relationships among the scores for Enjoyment, Anger, Anxiety, Shame and Hopelessness Before Learning and Taking a Test and that there is no relationship between the score of Hope Before Learning and Hope Before Taking a Test. As a result, it can be stated that as the score for Enjoyment, Anger, Anxiety, Shame and Hopelessness Before Learning and Taking a Test increases, so does the score for Enjoyment, Anger, Anxiety, Shame and Hopelessness Before Learning and Taking a Test increases.

Table 8. Findings about the relationship between during learning and during taking a test in terms of academic emotions

Learning	Taking a Test	r	p
Enjoyment During Learning	Enjoyment During Taking a Test	0.398	0.000
Hope During Learning	Hope During Taking a Test	0.418	0.000
Pride During Learning	Pride During Taking a Test	0.584	0.000
Anger During Learning	Anger During Taking a Test	0.451	0.000
Anxiety During Learning	Anxiety During Taking a Test	0.659	0.000
Shame During Learning	Shame During Taking a Test	0.654	0.000
Hopelessness During Learning	Hopelessness During Taking a Test	0.608	0.000

The findings are as follows: the correlation between the total score for Enjoyment During Learning and that for Enjoyment During Taking a Test was r=0.398and found to be statistically

significant($p<0.05$) ; the correlation between the total score for Hope During Learning and that for Hope During Taking a Test was r=0.418and found to be statistically significant($p>0.05$); the correlation between the total score for Pride During Learning and that for Pride During Taking a Test was r=0.584and found to be statistically significant ($p<0.05$); the correlation between the total score for Anger During Learning and that for Anger During Taking a Test was r=0.451 and found to be statistically significant ($p<0.05$); the correlation between the total score for Anxiety During Learning and that for Anxiety During Taking a Test was r=0.659and found to be statistically significant($p<0.05$); the correlation between the total score for Shame During Learning and that for Shame During Taking a Test was r=0.654and found to be statistically significant($p<0.05$); and finally, the correlation between the total score for Hopelessness During Learning and that for Hopelessness During Taking a Test was r=0.608and found to be statistically significant ($p<0.05$).

All these findings show that there are significant linear relationships among the scores for Enjoyment, Hope, Pride, Anger, Anxiety, Shame and Hopelessness During Learning and Taking a Test. As a result, it can be stated that as the score for Enjoyment, Hope, Pride, Anger, Anxiety, Shame and Hopelessness During Learning and Taking a Test increases, so does the score for Enjoyment, Hope, Pride, Anger, Anxiety, Shame and Hopelessness During Learning and Taking a Test increases.

Table 9. Findings about the relationship between after learning and after taking a test in terms of academic emotions

Learning	Taking a Test	r	p
Enjoyment After Learning	Enjoyment After Taking a Test	0.466	0.000
Pride After Learning	Pride After Taking a Test	0.677	0.000
Anger After Learning	Anger After Taking a Test	0.314	0.000
Shame After Learning	Shame After Taking a Test	0.609	0.000

The correlation between the total score for Enjoyment After Learning and that for Enjoyment After Taking a Test was r=0.466 and found to be statistically significant($p<0.05$) ; the correlation between the total score for Pride After Learning and that for Pride After Taking a Test was r=0.677and found to be statistically significant($p>0.05$); the correlation between the total score for Anger After Learning and that for Anger After Taking a Test was r=0.314and found to be statistically significant ($p<0.05$); the correlation between the total score for Shame After Learning and that for Shame After Taking a Test was r=0.609 and found to be statistically significant ($p<0.05$).

All these findings show that there are significant linear relationships among the scores for Enjoyment, Pride, Anger, Shame After Learning and Taking a Test. As a result, it can be stated that as the score for Enjoyment, Pride, Anger, Shame After Learning and Taking a Test increases, so does the score for Enjoyment, Pride, Anger, Shame After Learning and Taking a Test increases.

4. Discussion and Conclusions

Based on the findings of the study, being aware of the emotional experiences and academic emotions of the learners can enable teachers to take EFL prep-class students' academic emotions in learning and taking a test more seriously, so they can prepare the materials in accordance with the students' affective, cognitive, motivational and physiological sides in learning. All these findings demonstrated that there were significant linear relationships between the scores before learning and before taking a test, during learning and during taking a test, and after learning and after taking a test.

In this study, the results also reveal that there are significant relationships among the departments and gender as shown in the results in detail. For example, there are differences among male and female EFL prep-class students with regards to "Enjoyment", "Pride", "Anxiety" and "Shame" During Learning, and "Enjoyment" and "Pride" After Learning whereas there are no differences among other Academic Emotions. Another result shows that "Hope" During Learning is much higher among students studying Electrical and Electronic Engineering than students studying Chemical Engineering, Civil Engineering and Chemistry.

In conclusion, this study intended to present the relationships between academic emotions in learning and taking a test with regards to department and gender. The results of the study prove that male and female EFL prep-class students have sometimes different positive and negative academic emotions or attitudes towards learning and taking a test. The other significant finding of this study is that participants from different departments have also different approaches towards learning and taking a test as for academic emotions. The results of the study give insights into the students' academic emotions in learning and taking a test. Thus, for a more comprehensive picture of academic emotions, further studies conducted with also class-related emotions are recommended to draw conclusions from the present study.

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İngilizceyi yabancı dil olarak öğrenen hazırlık sınıfı öğrencilerin akademik duyguları üzerine bir araştırma

Öz

Bu çalışma, İngilizceyi yabancı dil olarak öğrenen hazırlık sınıfı öğrencilerin öğrenme ve sınava girmedeki akademik duygularının bölüm ile cinsiyet açısından bir incelemesidir. Akademik duygular; öğrenciler, ders materyalleri üzerinde çalışma, sınava tabi tutulma, ev ödevi yapma ve sınav sonucu alma gibi başarı odaklı durumları değerlendirdiğinde ortaya çıkar. Bu çalışmada, sınıf ile ilgili duygulardan ziyade, öğrenme ve sınava tabi tutulma hususundaki akademik duygular değerlendirilmiştir. Eğlenme, umut etme, gurur, sinir, gerginlik, utanç, umutsuzluk, sıkıntı ve rahatlama gibi dokuz duygu, Pekrun, Goetz ve Perry (2005) tarafından hazırlanan Başarı Duygusu Anketinin öğrenme ve sınava girme; öncesi, süresince ve sonrası bölümleri değerlendirilmiştir. 2011-2012 akademik yılında Erzurum Atatürk Üniversitesi Yabancı Diller Yüksekokulu hazırlık sınıfı öğrencilerinden 156 erkek ve 59 kız öğrenci, öğrenme ve sınava girmede akademik duyguların cinsiyet ve bölümler dikkate alınarak arasındaki farkı gözlemlemek için incelenmişlerdir. Çalışmanın sonucu erkek ve kız öğrencilerin ortalama puanları arasında anlamlı farklar olduğunu göstermiştir. Çalışma aynı zamanda akademik bölümler göz önünde bulundurulduğunda, anlamlı benzerlikler ve farklılıklar ortaya koymuş, öğrenme ve sınava girme hususundaki akademik duyguların değerlendirildiği sonuçlarda doğrusal ilişki olduğunu göstermiştir.

Anahtar Sözcükler: Akademik Duygular; öğrenme ve sınava girme; bölüm ve cinsiyet; İngilizceyi yabancı dil olarak öğrenen hazırlık sınıfı öğrenciler

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