



Differences in Academic Emotions and its Regulation Strategies between Male and Female Students of the University

Wessam Hamdy El-Kasaby¹, Yousef Mohamed Shalaby², Ahmed Ali Asiri³

¹ Associate Professor of Educational Psychology, King Khalid University. welkasaby@kku.edu.sa

² Associate Professor of Educational Psychology, King Khalid University. ymahmad@kku.edu.sa

³ Associate Professor of Statistics and research, King Khalid University. ahalaseri@kku.edu.sa

Abstract - The current study aims to explore the differences between university students (Males and females) in academic emotions, and the strategies used to regulate academic emotions. sample consisted of (178) students of King Khalid University, with mean age (21.78), SD (2.79). Measures of: academic emotion scale and academic emotion regulation strategies scale. The results showed that there were no statistically significant differences between Males and females' students in the emotions of; despair, anxiety, hope, pride, anger and shame", there were significant differences in enjoyment and boredom emotions, the differences in enjoyment were in the direct of male students, While the differences in boredom were in the direct of female students. As well as there were no significant differences between male and female in strategies; ability Development, redirection of attention, reassessment and catharsis). There were significant differences between male and female in the mean scores of the catharsis strategy. The differences were in the direct of female students, which indicates that female students are more likely to use this strategy compared to males, as well as statistically significant differences in the strategies of; avoidance of situations, repression and social support. the differences in avoiding situations were in the direct of male, while the differences in repression were in the direct of female students, and the differences in social support were in the direct of female's students.

Keywords:- academic emotions , regulation strategies , , students of the University

Received: 11 May 2024 **Revised:** 08 June 2024 **Accepted:** 26 June 2024

Introduction

Emotions are generally essential for human learning and growth. good learning means recognizing the feelings, emotions, beliefs, desires and problems facing students. learning happens with the full participation of feelings, emotions, mind and body. Students feel a variety of emotions in the learning environment, some of them enjoyment learning new subjects while others are bored with their lessons, some are proud of their academic achievements, others feel anxious while performing or preparing for an important test, while others feel ashamed of their failure. These emotions that students feel in the learning environment knowing achievement emotions or academic Emotions. (Pekrun et al.; 2002; linnenbrink, 2007; Pekrun, et al.; 2009; Pekrun, 2011).

The current study uses the term "academic emotion" in university environment. The concept of academic emotions refers to those emotions associated with academic situations, they involve complex psychological processes that include emotional, motivational and expressive components, and these emotions largely depend on the way teachers and students receive what is happening in the context of a particular activity. (Schutz & Pekrun, 2007).

More specifically," academic emotions are those related to either achievement outcomes e.g., anxiety, pride, shame associated with success or failure, or activities related to achievement and learning processes e.g., enjoyment of learning, boredom, anger (Pekrun et al., 2002, 42).

According to a review of research in the last ten years, noted that the cognitive approach has been dominant in the study of learning processes, with a noticeable increase in educational research that focuses on emotions, so

emotions occupy an important place in most modern educational psychology studies. (Paoloni, et al., 2014, 672).

Most studies that explore academic emotions variable has focused on emotions induced by achievement outcomes such as: Hope and pride associated with success or anxiety and shame associated with failure (Pekrun & Stephens, 2010, 258).

Many studies have focused on exploring the relationship between academic emotions and cognitive and motivational learning variables. For example, the results of a study (Frenzel et al., 2007) showed that there is a correlation between positive emotions and wide range of variables related to motivation such as (beliefs of competence, achievement value, learning goals, the entrance to performance and learning up to mastery, complex learning strategies, self-regulation) (Linnenbrink, et.al., 1999). other studies have also focused on the effects of academic emotions on academic achievement. In this regard, (Soric, et al., al., 2013) showed effect of academic emotions on achievement is associated with cognitive and motivational mechanisms (cognitive sources, motivation for learning, learning strategies). Some studies have focused on the mediating role of academic emotions in the relation between cognitive variables, motivation and academic achievement (Villavicencio & Bernardo, 2013).

Yukselir & Harputlu (2014) have proved that academic emotions are strongly related with motivation for achievement and a sense of self-efficacy. As the results of (King, et.al., 2014, 18) that students who report positive academic emotions are more likely to use different types of cognitive and metacognitive learning strategies while negative academic emotions are non- Conducted Jan, L. & Liu, W. (2012) a study aimed at examining the extent to which multiple achievement goals are adopted within an individual and their relationship to learning strategies, achievement emotions and academic achievement . The sample consisted of (480) high school students, aged (13-14 years) . The results showed that there are five clusters of students with different achievement goal profiles, and the results of analysis of the differences showed that these groups differ significantly in achievement emotions, in the use of learning strategies , and in academic achievement in mathematics statistically significant predictors of the strategy used.

Hassanin (2012) conducted a study to reveal the causal relationships between the emotional support of the teacher and the students ' academic emotions and the extent of their use of the strategy of seeking help and cognitive integration of middle school students. The study was conducted on a sample of (200) middle school students. The results have shown the positive role of academic emotions and a sense of educational pleasure in the integration of students within the classroom and the completion of the required educational tasks and activities.

With regard to gender differences in academic emotions, Cocorada (2016) examined relation between emotions related to learning and academic performance of university students, where the study was applied to a sample of 213 university students (92 students, 121 students) . academic emotions questionnaire, used the learning challenges scale, and identified socio-demographic factors. The results of the study showed: There were significant differences between the sexes in learning emotions, where the level of positive and energizing emotions was higher for females, while the level of anger and negative activation emotions was higher for males.

The control – Value theory of achievement emotions by Pekrun (2006) represent theoretical framework of academic emotions, through which the emotional dynamics was explained in relation to the characteristics that characterize educational situations, where it assumes that students ' emotions are influenced by their perceptions of efficiency and control /control during academic activities and outputs, as well as their estimates of the value of these activities and outputs.

The theory classified academic emotions on the basis of three main dimensions: object focus, valence, activation. With regard to the goal of object focus, the theory assumed two main aspects: whether the individual focuses on achievement activities or focuses on outputs. As for valence, emotions can be classified into positive or pleasant (enjoyment, hope, pride, happiness, satisfaction), and negative emotions (anger, despair, anxiety, sadness, shame) . As for the degree of activation of emotions, which refers to a state of exceptional activation or emotional activation, which puts a person in physiological states when responding to emotional experiences . During emotional activation or activating emotions (positive or negative), we can refer to emotions of happiness, hope,

pride, anxiety, anger, anxiety . While in the case of emotional inactivity or non-activation emotions, we can identify emotions such as, satisfaction, despair, boredom. (Jacobs& Gross, 2014).

On the other side Students use certain strategies to regulate such emotions, starting with cognitive assessments about the person's orientation towards the goal and dealing with the environment, as students ' emotions can be destructive and interfere with their goals, so it is necessary that students use successful strategies to regulate those emotions through which they can control the appearance, intensity and duration of the emotions they feel (Shahba et.al, 2014 ; Buric, et.al, 2016, 138).

Compare et al(2014) defines emotion regulation as a set of cognitive processes that affect the type of emotional response and how individuals tell and express these emotions. emotion regulation is a complex process that includes: initiation, inhibition, and adjustment of the following aspects of emotional function.

Gross's model (1998) is one of the most important theoretical models of emotion regulation. this model describes emotion regulation processes as all the conscious and unconscious strategies that are used to raise or lower one or more components of the emotional response or maintain them. The components of emotion regulation are represented in three components : first the component of experience, representing the subjective feelings of emotion, second the behavioral component, and the physiological component .According to the model, there are five processes in emotion generation that can be targeted: situation selection ,situation adjustment, directing and distributing attention, cognitive change, response adjustment .The individual uses certain strategies to influence the level of emotional response and to avoid the appearance of a high or low level of emotional response, Gross distinguishes between two different strategies :the first is pre-focus and applied by the individual in case of readiness to respond before interacting with the trigger of the emotional situation, and the second strategy is to focus on the response and applied by the individual when he is in a state of emotional response and the emotion is present normally .

Schmidt et al.(2010)study showed the presence of certain academic emotions associated with the use of different emotional regulation strategies, for example, anxiety was associated with focusing on the test, frustration with the strategy of suppression, and pleasant emotions were associated with strategies of re-evaluation and focus on the problem.Ben-Eliyahu & Linnenbrink-Garcia (2013) also found that emotion self-regulation strategies are employed differently with respect to the preferred course, but they indicate that the maladaptive characteristic is associated with venting and suppression and the adaptive characteristic with re-evaluation, in light of pleasant emotional experiences versus unpleasant ones. Gross & Thompson study (2007) also showed that re-evaluation strategy was positively associated with openness, pleasant emotions and adaptive outcomes and negatively associated with unpleasant and neurotic emotions

The study conducted by Soric aimed, et.al., (2013) to examine the unequal contributions of: the Big Five Factors of personality and cognitive control, value assessment and the tendency of students to reassess or suppress their emotions (as strategies for emotional regulation) in relation to the experience of academic emotions of: despair, anger, anxiety, shame. The study was conducted on(500) students of the Higher School .The study has reached a number of results, the most important of which is that females feel high levels of negative emotions (despair, anger, shame) compared to males.

The study (King, et al., al.2014) explored how academic emotions are related to the use of cognitive and metacognitive learning strategies, the study was conducted on a sample of (1147) high school students who responded to the identification of academic emotions and identification of cognitive strategies (elaboration, organization, re-listening), and identification of metacognitive strategies (planning, monitoring organization).The results of the study showed that students who report positive academic emotions are more likely to use different types of cognitive and metacognitive strategies, while negative academic emotions were found to be non-predictors of strategies Used ones .

Buric et al. (2016) has been confirmed on the importance of analyzing the distinctive contribution of emotion regulation strategies to the interpretation of various academic outcomes, and that many complex relationships between the emotional, cognitive and motivational aspects of learning are insufficiently explained. The aim of the study of Buric et, al.(2016) to build a psychometric tool for assessing the emotional regulation strategies used by

students in various academic situations, the study was conducted on separate samples of university and secondary school students prepared by (200, 1030, 359, 230) the academic emotion regulation questionnaire was built where the tool included eight sub-scales, each of which measures a separate strategy (avoiding situations, developing abilities, redirecting attention, rechecking, suppression, catching breath, venting, seeking social support), and was associated with the external variables studied (gender, cognitive reassessment, academic emotions, academic achievement, attitudes The goal)

It is noted that the studies that examine the strategies of regulating academic emotions were not interested in studying the relationship of these strategies with academic outcomes, which is what the current study focused on. Pekrun & Stephens, (2010) emphasize that the emotions we feel in the University situation are a tool for university achievement and personal growth. In this context, the results of studies (Frenzel, et.al., 2007; Balzarotti, et. , al,2014), show that academic emotions affect students' learning and achievement, this effect has been proven in relation to students' motivation. It is clear that the role of emotions in learning and achievement is still controversial, as some have assumed that positive emotions may harm the learning process because positive emotions can lead to unrealistic evaluation, facilitate the superficial processing of information and reduce motivation.

With regard to gender differences in academic emotions, the results of the studies varied, as the results of the Soric et.al. (2013) study showed, that females show high levels of negative emotions compared to males, and the results of the study of Yukeslir & Harputlu (2014) also showed that there are gender differences in emotions of enjoyment, pride and anxiety.

Research questions:

Q1 - Are there differences between male and female university students in academic emotions?

Q2 - Are there differences between male and female university students in the strategies used to organize academic emotions?

Current study

The current study aimed to:

- Identify the differences between male and female university students in academic emotions.
- Identify the differences between male and female university students in academic emotion regulation strategies.

Research Hypothesis:

H1: We expected statistically significant differences between male and female university students in academic emotions.

H2: We expected significant differences between male and female university students in academic emotions regulation strategies.

Method:

Participants

The sample was comprised (178) students (72 s males, 106 females) from Saudia Arabia, King Khalid University, with the mean age (21.78) and SD (2.79).

Measures:

Academic Emotions Scale (AEQ):

This scale was developed through the main principles and postulates of the control - Value Theory of emotions associated with achievement developed by (Pekrun, 2006) as well as the academic emotion scale prepared by Pekrun, et.al. (2005), and studies that used tools to measure academic emotions such as (Paoloni, et al., al.,2014; Peixoto, et.al.2015; Pekrun, et.al.,2011; Frenzel, et.al,2007; Berg,2008).

The scale consists of (52) items distributed over eight sub - scales of emotions, three positive emotions subscales (hope, pride, enjoyment) and five negative emotions subscales (despair, anxiety, anger, boredom, shyness), that are answered according to the five-point Likert scale; strongly agree, agree, neutral, disagree, strongly disagree.

Validity of consistency of the scale: was verified by computing the correlation coefficient between the item score and the total score on the scale was calculated after deleting the item score, the values of the correlation coefficients ranged between (0.36 to 0.68) and were all a statistically significant.

Reliability of the scale: was verified by computing the reliability coefficient of Alpha Cronbach for the scale (0,86), and the coefficients for each of the eight sub-scales of positive and negative emotions were respectively. (0.73 ,0.79,0.68,0.71,0.80,0.76,0.72,0.70).

Academic Emotion Regulation questionnaire (AERQ)

Buric et.al. (2016) developed a self-report to evaluate the emotional regulation strategies used by students in various academic situations. The questionnaire was translated and reworded into Arabic and presented to specialists in Arabic and English for linguistic review, to be then presented to evaluators in educational psychology.

Final questionnaire comprised of (37) items divided into eight sub-scales, each of which measures a separate emotional regulation strategy: avoiding academic situations, developing abilities, redirecting attention, rechecking, suppression, breathing (taking a breath) and catharsis, social support. Participants responded to the items on a 5-point scale ranging from1 (Never)to 5 (always)

Validity: was verified by computing the correlation coefficient between the score on each of the item of the five sub scales and the total score for positive strategies (capacity development, redirection of attention, reassessment, breathing, social support) and the total score on the scale was calculated after deleting the item score, the correlation coefficients ranged between (0.34, to 0.68). As well as the correlation coefficients between the score on each of item of the three subscales and the total score of negative strategies (avoidance of situations, repression, venting) after deleting the item score, values of the correlation coefficients ranged between (0.31 – 0.64) statistically significant.

Reliability was verified by computing the reliability coefficient of Alpha Cronbach for the scale (0,84) and Its value for each of the eight sub-scales was, (0.64,0.59,0.79,0.77,0.69,0.84,0.74,0.83). respectively

Results:

Results of the H1:

Independent samples t-test are presented in Table 1. differences between the means of the academic emotion scores of the two groups of students, and Table (1) shows the results of this

Table (1) T-test for mean differences between the between male and female student groups in academic emotions

Emotion	group	No.	mean	SD	T	df	Sig.
Despair	Male	72	17	6.11	0.45	176	Non
	Female	106	17.36	4.62			
Anxiety	Male	72	18.06	5.59	1.07	176	Non
	Female	106	18.95	5.23			
Hope	Male	72	20.73	3.35	0.086	176	Non
	Female	106	20.77	2.43			
Pride	Male	72	27.15	4.52	0.22	176	Non

	Female	106	27.29	3.83			
Anger	Male	72	14.88	4.2	0.38	176	Non
	Female	106	15.12	3.77			
Enjoyment	Male	72	21.9	4.15	2.25	176	0.05
	Female	106	20.53	3.85			
Boredom	Male	72	18.08	5.75	2.27	176	0.05
	Female	106	19.91	4.93			
shame	Male	72	16.11	5.51	1.55	176	non
	Female	106	17.5	6.05			

Table (1) shows:

- There are no statistically significant differences between male and female groups in means of emotions scores (despair, anxiety, hope, pride, anger, shame).

- There are statistically significant differences at the level of (0.05) between male and female groups in means of emotions scores (enjoyment, boredom).

The differences in enjoyment were in directed to male group, while the differences in boredom were in directed to female group students.

Results of the H2:

Independent samples t-test are presented in Table 2. differences between the means of academic emotions regulation strategies scores of the two groups of students, and Table (2) shows the results of this

Table (2) T-test for mean differences between the between male and female student groups in academic emotions regulation strategies

strategies	group	No.	mean	SD	T	df	Sig.
Avoid situations	Male	72	14.44	4.46	4.34	176	0.01
	Female	106	11.76	3.73			
Abilities development	Male	72	18.45	4.76	0.44	176	Non
	Female	106	18.71	3.04			
Redirect attention	Male	72	18.097	5.8	0.72	176	Non
	Female	106	18.66	4.77			
revaluation	Male	72	15.44	5.34	0.99	176	Non
	Female	106	14.71	4.41			
Repression	Male	72	15.55	5.73	2.43	176	0.05
	Female	106	17.28	3.75			
Breathing	Male	72	10.69	3.14	2.68	176	0.01
	Female	106	11.88	2.74			
Venting	Male	72	14.44	4.46	0.23	176	non
	Female	106	11.76	3.73			
Social support	Male	72	18.45	4.76	2.05	176	0.05

Table (2) shows:

- There are no statistically significant differences between male and female groups in means of emotions regulation strategies; abilities development, redirect attention, revaluation and venting strategies.

-There are statistically significant differences at the level of (0.05) between male and female groups in means of emotions regulation strategies; avoid situations, repression, breathing and social support strategies. The differences in avoiding situations strategy were in directed to male group,

While the differences in repression and social support strategy were in directed to female group.

Discussion:

Regarding the result of the first hypothesis results showed; there are no significant differences between male and female groups in emotions of "despair, anxiety, hope, pride, anger, shame" while there are significant differences between male and female groups in emotions of (enjoinment, boredom). It seems that the result of the current study did not resolve the discrepancy between previous studies on gender differences in academic emotion; The results of the Soric ,et.al(2013)study showed that females report higher levels of negative emotions compared to males, Which is partially consistent with the result of the current study regarding the emotion of boredom. The results of the yukselir &Harputiu (2014) study also showed that there are differences between males and females in enjoyment, pride, anxiety and shyness (during learning) and differences between them in enjoyment and pride (after learning); Which is partially consistent with the results of the current study regarding the emotion of enjoyment. The results of the current study also contradict the results of the Cocorada (2016) Study which showed the presence of gender differences in positive motivational emotions in direct females. Perhaps this apparent discrepancy in the results of studies regarding gender differences in academic emotions may be due to the different cultural and social environments and educational systems of the samples on which these studies were conducted. This view is supported by Pekrun 's assumption in the control – value model that cultural and social antecedents are one of the most important determinants of academic emotions.

Regarding the result of the second hypothesis results showed; there are no statistically significant differences between male and female groups in means of emotions regulation strategies; abilities development, redirect attention, revaluation and venting strategies. This means that both sexes use these strategies to a similar degree, and it is noted that all of them are positive adaptive strategies, except for the venting strategy, which is considered a negative strategy.

The presence of differences between male and the female students in the breathing strategy in direct to female group indicates that female students are more used to this strategy compared to males, which can be due to the nature and characteristics of females and the cultural and social framework of the environment.

The presence of differences between male and female groups in means of emotions regulation strategies; avoid situations, repression, breathing and social support. It can be explained as a result that males are more avoidant of situations than females, which is a negative strategy to the nature and characteristics of the male society and the social environment of the Arab society, which gives him opportunities to avoid situations or escape from them to other alternative situations without social pressure or societal accountability. The finding that females are more used to the strategy of repression and social support than males can also be explained in the light of female characteristics. The female is always more resorted to suppressing her emotions as a result of the nature of society and the restrictions imposed on her that do not allow her to fully express her emotions and desires.

Acknowledgment:

The authors extend their appreciation to the Deanship of Scientific Research at King Khalid University for funding this work through large Groups Project under grant number (RGP.2/355/1445).

References:

- [1] Balzarotti, S., Biassoni, F.; Villani, D.; Prunas, A.; Velotti, P. (2014). Individual Differences in Cognitive Emotion Regulation: Implications for Subjective and Psychological Well-Being. *Journal of Happiness Studies*,4,1-11.
- [2] Beck, G., L. (2011). Investigation the relations between achievement emotions and academic performance in medical students. PHD. Capella University. USA.UMI 3469946
- [3] Ben-Eliyahu, A., & Linnenbrink-Garcia, L. (2013). Extending self-regulated learning to include self-regulated emotion strategies. *Motivation and Emotion*, 37(3), 558–573.
- [4] Brown R.; Gonzalez R.; Zagefka H.; Manzi J. & Cehajic S. (2008). Nuestra Culpa: Collective guilt and shame as predictors of reparation for historical wrongdoing. *Journal of Personality and Social Psychology*, 94: 75–90.
- [5] Buric, I., Soric, I., Penezic, Z. (2016). Emotion regulation in academic domain: development and validation of the academic emotion regulation questionnaire (AERQ). *Personality and individual differences*, 96, 138-147.
- [6] Cocorada, E. (2016). Achievement emotions and performance among university students. Bulletin of the Transilvania University of Braşov, Special Issue Series VII: Social Sciences Law, Vol. 9 (59) No. 2.
- [7] Compar.A. Zabro, C.; Shonin, E.; Gordon, W. &Marconi, C. (2014). Emotional regulation and depression: A potential mediator between heart and mind. *Cardiovascular Psychiatry and Neurology Article ID 324374*,1-10.
- [8] Frenzel, A.C.; Thrash, T., M.; Pekrun, R. & Gotez, T. (2007). Achievement emotions in Germany and China. A Cross-Cultural Validation of the Academic Emotions Questionnaire–Mathematics. *Journal of Cross Cultural*. 38 (3), 302-309.
- [9] Gross, J. (1998). The emerging field of emotion regulation: An integrative Review of General Psychology, 2, 271–299.
- [10] Gross, J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3–24). New York: Guilford Press.
- [11] Hassanein, Abbas Eatedal (2012). The explanatory causal model of the relationship between the teacher's perceived emotional support, academic pleasure, belonging to the classroom environment, the strategy of seeking academic assistance and cognitive integration among middle school students. *Journal of the Faculty of Education, Ain Shams University*. 36(4),190-241.
- [12] Jacobs, S., & Gross, J. J. (2014). Emotion regulation in education: Conceptual foundations,current applications, and future directions. In R. Pekrun, L. Linnenbrink-Garcia (Eds.), *Handbook of emotions in education* (pp. 183–201).New York, NY: Routledge.
- [13] Jan, L.Y. &Liu, W.C. (2012). 2 × 2 Achievement goals and achievement emotions: a cluster analysis of students' motivation. *Eur J Psychol Educ*, 27:59–76
- [14] King, R. & Areepattamanni, S. (2014). What students feel in school influences the strategies they use for learning: academic emotions and cognitive /meta-cognitive strategies. *Journal of Pacific RIM Psychology*, 8, (1): 18-27.
- [15] Kahu, E.; Stephens, C.; Leach, L; Zepke, N.(2015). Linking academic emotions and student engagement: mature-aged distance students' transition to university. *Journal of Further and Higher Education*.,39(4): 394–481.
- [16] Linnenbrink, E. A. (2007). The role of affect in student learning: A multi-dimensional approach to considering the interaction of affect, motivation,and engagement. In P.Schutz, & R. Pekrun (Eds.), *Emotion in education* (pp. 107–124). San Diego, CA: Academic Press.
- [17] Linnenbrink, E. A.; Ryan, A. M. & Pintrich, P. R. (1999). The role of goals and affect in working memory functioning. *Learning and Individual Differences*, 11, 213–230
- [18] Paoloni, P.V.; Vaja, A.B. &Munoz, V.L. (2014). Reliability and validity of the achievement emotions questionnaire. A study of Argentinean university students. *Electronic Journal of Research in Educational Psychology*, 12(3),671-692.
- [19] Peixoto, F.; Mata, L.; Monteiro, V.; Sanches, C., &Pekrun, R. (2015). Develop metrics the Achievement Emotions Questionnaire: Validation for Pre-Adolescent Students. *European Journal of Developmental*, 12, No. 4, 472–481.

- [20] Pekrun, R. (2006). The Control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. *Educational Psychology Review*, 18, 315-341.
- [21] Pekrun, R. and Linnenbrink, L.G (2012). Academic Emotions and Student Engagement. S.L. Christenson et al. (eds.), *Handbook of Research on Student Engagement*, 259. Springer Science Business Media, LLC.
- [22] Pekrun, R.; Elliot, A. J. & Maier, M. A. (2009). Achievement goals and achievement emotions: testing a model of their joint relations with academic performance. *Journal of Educational Psychology*, 101, 115-135.
- [23] Pekrun, R., Goetz, T., & Perry, R. P. (2005). *Academic Emotions Questionnaire (AEQ): User's manual*. Munich, Germany: University of Munich, Department of Psychology.
- [24] Pekrun, R.; Frenzel, A.; Goetz, T., & Perry, R. (2007). The Control-Value Theory of Achievement Emotions: An Integrative approach to emotions in education. In P. Schutz, & R. Pekrun (Eds.), *Emotion in Education* (pp.13-36). San Diego: Academic Press.
- [25] Pekrun, R.; Goetz, T.; Frenzel, A.; Barchfeld, P., & Perry, R. (2011). Measuring emotions in students' learning and performance: The Achievement Emotions Questionnaire (AEQ). *Contemporary Educational Psychology*, 36, 36–48.
- [26] Pekrun, R.; Goetz, T.; Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist*, 37, 91-106.
- [27] Pekrun, R. & Stephens, E. J. (2009). Goals, Emotions, and Emotion Regulation: Perspectives of the Control-Value Theory. *Human Development*, 52, 357–365.
- [28] Pekrun R. & Stephens E.J. (2010). Achievement Emotions in Higher Education. J.C. Smart (ed.), *Higher Education: Handbook of Theory and Research* Springer Science Business Media B.V.
- [29] Schmidt, S.; Tinti, C., Levine, L., & Testa, S. (2010). Appraisals, emotions and emotion regulation: An integrative approach. *Motivation and Emotion*, 34, 63–72.
- [30] Schutz, P. A., & Pekrun, R. (2007). *Emotion in education*. San Diego, CA: Academic Press.
- [31] Shahba, S.; Alvani, S. M.; Zahedi, S. A., & Memarzadeh, G. (2014). An investigation on the effect of cognitive emotion regulation strategies on job satisfaction. *Management Science Letters*, 4, 1315-1324.
- [32] Sorić, I.; Penezić, Z.; Burić, I. (2013): Big Five Personality Traits, Cognitive Appraisals and Emotion Regulation Strategies as Predictors of achievement student attrition. Chicago: University of Chicago Press.
- [33] Villavicencio F. T & Bernardo B., I. (2013). Positive academic emotions moderate the relationship between self-regulation and academic achievement. *British Journal of Educational Psychology*, 83, 329–340.
- [34] Yukselir, c. & Harputlu, L. (2014). An investigation in EFL pre-class students' academic emotions. *Journal of Language and linguistic Studies*.10 (2), 100-119