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Interplay Of Students' Academic Emotions And Academic Achievement At Higher Secondary School Level

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ABSTRACT

This quantitative inferential survey research study was carried out on 312 higher secondary school students, investigating the interplay of Students' academic emotions (Hopelessness, Boredom, Anxiety, Anger, Relief, Enjoyment, and Pride), and Academic Achievement in district Bannu. Data was collected from the sample through a valid and reliable questionnaire. During the selection of the sample, a cluster random and proportional allocation technique was used; as descriptive statistics, the mean and standard deviation were used. As an inferential statistical test, linear regression and Pearson coefficient correlation were used. The findings of this study revealed that students experience various types of academic emotions while studying and that this has a significant relationship with academic achievement. According to the researcher, schools should provide students with an environment where all academic emotions can be focused on and promoted.

Key words: Academic Achievement, Academic Emotions, Higher secondary school students, Correlation.

INTRODUCTION

The influence of academic emotions on students learning is point of attention for researchers and common men nowadays (Camacho-Morles et al., 2021). Academic emotions have been divided into four categories based on the concepts of arousal and enjoyment: positive low-arousal (PLA), positive high-arousal (PHA), negative low-arousal (NLA) and negative high-arousal (NHA), (NLA; Dong & Yu, 2007; Pekrun et al., 2012). Pleasure, pride and hope, are PHA emotions; calm, relief and satisfaction, are PLA emotions; anxiety, anger, and humiliation are NHA emotions; and hopelessness, boredom, sadness, and exhaustion–upset are NLA emotions (Dong & Yui, 2007. Among other variables, academic emotions are associated with cognitive activity, learning motivation and different strategies as well as academic achievement (Pekrun et al., 2002; Turner & Schallert, 2001). Learning motivation, performance engagement, satisfaction and achievement are positively impacted by positive academic emotions (Wu, & Yu, 2022).

Academic emotions may not only be the results of achievement activities and results, but they may also be crucial for subsequent learning. (Pekrun et al., 2017; Pan et al., 2022). Evidence suggested that achievement emotions may have a significant effect on students' ability of problem-solving (Lee and Chei, 2020)

Both students and teachers are affected by academic emotions, which range from positive (e.g., enjoyment) to negative e.g., frustration and anxiety. Academic emotions have received little attention in educational studies, despite their presence and pervasiveness. According to Linnenbrink-Garcia and Pekrun, (2011)"Research on emotions is still in its infancy".

Given that "Academic emotion is the cornerstone of learning," (Zull,2006), the neglect of Academic emotions is concerning. Emotions temper the interest of students and encourage them to begin studying. They have an impact on what is remembered and learned. Emotions play an important role in learning, according to several studies in a variety of fields, including neuroscience, education, and psychology (Seli et al. 2016; Tyng et al. 2017; Um et al. 2012).

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Students in classroom settings experience a variety of academic emotions related to learning and assessments, which can be positive or unpleasant , while some of the emotions may be tied to challenges in the classroom, others may be related to events that occur outside of the school setting. According to (Pekrun, 2014), there are four primary types of emotions associated to the classroom and students' learning.

Types of Academic Emotion

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1. Achievement emotions: Emotions associated with academic learning assessment are known as achievement emotions. Joy of learning, anxiety about academic success, and hope and satisfaction in achievement are only a few of them.

2. Epistemic emotions: Cognitive challenges connected to astonishment when completing novel tasks, such as curiosity, bewilderment, and frustration when problems arise; and happiness when a problem is solved. It has the most to do with completing new duties.

3. Topic emotions: are feelings about topics that arise during the delivery of teachings. Topic emotions include both good and negative feelings, such as sympathy, worry, disgust, and delight.

4. Social emotions: Both the teacher and the pupils in the class can experience social emotions. Love, compassion, sympathy, admiration, contempt, envy, anger, and social anxiety are only a few of them. These are feelings that arise as a result of classroom interaction and learning.

Academic Emotion is a feeling that occurs as a result of a reaction to something in the classroom or in a situation. Among other emotions, boredom, hopelessness, people can feel joy, sadness, anger, delight, and pride. Students, on the other hand, go through a variety of emotions in the classroom, some of which are related to learning and others that are unrelated to the classroom or even the school environment. Positive deactivating, Positive activating, negative deactivating and negative activating, are the four basic types of emotions that affect

academic achievement (Pekrun, Reinhard, Goetz , Thomas, Titzi, Wolfram, & P. Perry., Raymond, 2002).

The three primary forms of discrete emotions are arousal (high/ low), and motivational direction (approach/avoid) valence (positive/negative), (Harmon -Jones, Bastian, & Harrmon-Jones, 2016). Discrete emotions include triggering situations, individual sentiments, explicit deed tendencies, and reasoning evaluations. Fear, Anger, disgust, and anxiety are some of the unpleasant emotions with motivational inclinations and high stimulation:

Anger: Anger is characterized by inward and downward movement of the stiff gaze, brow muscles, and enlargement of the nostrils and wings of the nose. Anger and exasperation are other adjectives for anger (Shaver, Schwartz, Kirson, & O'Connor, 1987).

Fear: Fear is another unpleasant feeling that is related with brows that are raised and squeezed, eyes that are wide open, and the side of the lips that is withdrawn back and half open (Izard, 1992), other terms for fear include horror, alarm, and dread (Shaver et al., 1987).

Anxiety: Anxiety is a negative emotion, but it is not considered a fundamental emotion (Harmon-Jones et al., 2016). Because anxiety is considered a subset of the fear cluster, this is the case (Shaver et al., 1987). Despite the fact that there is a link between the brain systems that support anxiety and fear, events that show likely undefined hazards usually cause anxiety, whereas severe threats usually cause terror. Anxiety is manifested on the face in the form of eye hooks and head spins, which increase the amount of space visible to the eyes (Perkins, Adam M. Inchley-Mort, Sophie L. Pickering, Alan D. Corr, Philip J. Burgess, 2012). Uneasy or tense can also be used to describe anxiety (Shaver et al., 1987).

Sadness: Sadness is a low-arousal negative emotion that is often associated with the approach motivational system (Harmon-Jones et al., 2016). Sadness is indicated by dragging the corners of the mouth downward and trembling and pushing up the chin, as well as tightening the inner corners of the brows upwards, narrowing the eyes somewhat, and trembling and pushing up the chin. Suffering, depression, and disappointment are other terms for sadness (Shaver et al., 1987).

Boredom: According to Fisher (1993), boredom is described as "an unpleasant and fleeting event characterised by a pervasive loss of interest and trouble concentrating on the current activity" (Sharp, Hemmings, Kay, & Atkin, 2018a). It is the ability to have a strong desire to complete a task yet not be able to do so (Eastwood, Frischen, Fenske, & Smilek, 2012). It is thought to be linked to feelings of isolation and withdrawal, as well as anxiety, sadness, and aggressive behaviour (Sharp, Hemmings, Kay, & Atkin, 2018b).

Academic Emotions are psycho-neural processes that influence the intensity and patterning of actions in the dynamic flow of strong behavioural exchanges between animals and specific things required for survival. As a result, each emotion has its own "feeling tone," which is crucial for encoding the inherent values of these interactions, which are based on their likelihood of assisting or obstructing survival (both in the immediate "personal" sense and in the long-term "reproductive" sense). Subjective experiential feelings are the result of interactions between various emotional systems and the "self's" fundamental brain substrates, which are important for encoding new information, retrieving information from subsequent events, and allowing individuals to generalize new events and make quick decisions (Panksepp, 1998).

Academic emotions, according to many academics, play a significant role in the learning event and can even serve as a learning foundation

(Pekrun and Linnenbrick-Garcia: 2014). Emotions are significant in adult learning, according to several researchers (Zeivots: 2016; Dirkx and Espinoza: 2017). They also suggest that more and better research in this area is still required. Pekrun et al. (2010) focused on emotions in education, developing a solid theoretical framework and accumulating empirical evidence to back up the significance of emotions in learning. Pekrun and his co-worker (2010) investigated the effects of various emotions on students and teachers. Their research sheds light on the problem and encourages further investigation.

According to Goetz et al. (2003), there are three reasons to study emotions in an educational setting: their influence on learning quality, students' well-being (bodily and mental health), and their involvement in socializing (teachers and peers). Students' internal motivation to study, which is based on their enthusiasm and curiosity for learning, as well as their external motivation, which is linked to achieving positive results or avoiding negative consequences, are thought to be influenced by emotions. Emotions are also thought to facilitate the execution of certain learning methods (Goetz et al., 2003). Emotions can also have an impact on one's ability to maintain self-control. Internal and external motivation, as well as flexible learning strategies and self-regulation, are thought to be enhanced by positive emotions such as joy, hope, and pride. (Tyng et al., 2017). As a result, they have a positive effect on academic performance. On the other hand, negative emotions like boredom and hopelessness are known to lower motivation and speed up information processing, indicating a negative impact on results. Some academics believe that the emotional impact on students' mental and physical states plays an important role in their learning (Goetz et al., 2003; Rudd, 2012). As an outcome, emotions that affect one's mental state can lead to a wide range of behavioural changes, which are frequently communicated. This shows that emotional well-being and learning capacity are inextricably linked.

During the learning process, teachers have a significant emotional impact on their students. In other words, the mood of the students can reflect the professors' feelings. As a result, teachers must be emotionally aware for their negative personal feelings not to interfere with their work (Rudd: 2012). This can be significant if a student needs to study important literature in order to prepare for an exam or test, but finds it boring. Even if he or she has no desire to learn, he or she should find a way to do so in that case. One way to accomplish this is to use a "reappraisal" strategy, which entails attempting to improve one's mood and elicit positive emotions by doing something enjoyable.

This ability is also known as a critical adaptive function for understanding others and being socially engaged. At work, this is a psychological factor. Rudd (2012) has also looked into the impact of physical factors. She emphasises that learning requires a good physical state, which can be achieved through physical exercises that elicit positive emotions. Recalling a pleasant memory, on the other hand, may elicit positive feelings that are beneficial to one's health (Rudd: 2012). Such regulation, when necessary, could be a very valuable and effective strategy for improving learning capacities. Relationships built on trust and support between teachers and students. To put it another way, it is teachers who are "wholeheartedly" committed to their work and devote their entire lives to teaching. According to Dirkx and Espinoza,(2017) academic emotions are manipulated in order to engage students with the subject). These types of interactions frequently create a welcoming environment in which leaners can be open and honest. The primary teacher's role is to be open and allow students to share similar feelings, as well as to assist and inspire students to develop a common language with their peers. Assist and

encourage students to develop a shared language with their classmates.

Furthermore, the ability to control academic emotions is socially linked and evolves with time (Jarvis: 2009). This is largely due to schooling, where children learn to communicate with and comprehend others. That is, you must recognise that you are not alone and must regard the feelings of others (Jarvis: 2012b). That suggests acceptable behaviour that sometimes goes against one's emotional state, such as being cool when frustrated.

Concept of academic achievement:

The word 'academic' is derived from the word academy, which refers to a school where specialized types of training are provided. Academic achievement refers to the grades received on school and college assessments in general. It refers to a student's level of intellectual achievement. It has a multifaceted nature and is concerned with human development, including cognitive, emotional, social, and physical development Achievement is a measure for evaluating a student's competency. (Madigan and Curran, 2021).

Importance of Academic Achievement

In today's knowledge century, everything changes swiftly. Academic performance boosts students' self-esteem, respect, and confidence, helping them to compete successfully in society. Academic achievement is important in one's personal life because it motivates students to set high goals and work toward them (Bala, k. 2014). . Well-educated and academically successful individuals are easily employed. They have more stable jobs and job opportunities than people with less education. They also earn more money and are hence less dependent on others. Academic achievement is linked to high self-esteem, low feelings of despair and anxiety, a social bent, and a lower risk of alcohol abuse or substance abuse. As a result, academic accomplishment is extremely important and required for a student's academic development.

Academic achievement synonyms include:

Academic achievement includes terms such as talent, skill, hope, brainpower, potential for achievement, educational motivation, academic performance, grade point average, academic attainment, academic status, knowledge level academic skills, educational attainment, , mathematical achievement, reading achievement, and so on.(Knapp , 2012).

Academic achievement has been found to be a useful tool for assessing educational systems, schools, teachers' classroom management abilities, and changes in students' success or failure (Li, Xu, Shao, & Sang, 2015). As a result, many academics have focused on the properties of academic emotions on achievement, and the related effects have been investigated in a large body of empirical research (see, for example, Dong & Yu, 2010; Kim & Hodges, 2012), with mixed results. Positive emotions have a positive impact on academic performance, such as high grades and exam results. (Kim & Hodges, 2012; Villavicencio & Bernardo, 2013), whereas negative (-ive) emotions have negative (-ive) academic effects, such as low grades and exam performance (Kim & Hodges, 2012; Villavicencio & Bernardo, 2013 (Positive academic emotions improve motivation and effort put into studying, stimulate innovative learning practices, and help students display self-regulated learning (Dong & Yu, 2007). Negative emotions, on the other hand, might reduce learning motivation and effort, lead to mechanical learning issues (such as repetitive memorizing), and increase students' learning in ways that rely on external rather than inner motivational elements (Pekrun et al., 2002).

Students, on the other hand, are exposed to a wide spectrum of Academic Emotions while

teaching and studying in an educational context. These academic emotions could be triggered by external circumstances such as illness, finances, or other personal concerns, or they could be related to the subject or the teacher who is teaching the course. All of these factors can affect a student's ability to pay attention in class. Academic Emotions are important aspects of learning that should not be overlooked.

As a result, it's necessary to factor emotions into educational planning because they're crucial to classroom teaching and learning. If a student is bored and thinking about anything outside of the classroom, for example, he or she is not concentrating and learning is not going place. Additionally, if a student is worried during a class or a test, it may be detrimental to that student's performance. As a result, understanding the emotions that students experience during learning is crucial in supporting teachers and educational planners in establishing successful learning practices that will aid in the achievement of curricular goals. As a result of the preceding, it is evident that the classroom is an emotionally charged atmosphere in which students experience a wide range of emotions on a regular basis.

Many studies have looked at the impact of academic emotions on academic achievement and student motivation independently; however, studies on academic emotions of students' were scarce, particularly in Pakistan. Our researchers have consistently neglected students' academic emotions and academic achievement.

To fill this research gap, the researcher was interested to investigate the students' academic emotions and its correlation with their academic achievement at Public Higher Secondary School level in district Bannu".

This study was led by the following research questions: What is the level of Students' academic emotions (Boredom, Hopelessness, Anger, Anxiety, Enjoyment, and Pride) at public higher secondary school level in district Bannu? What is the correlation between academic emotions and their academic achievement of higher secondary students' of public schools located in district Bannu?

The Study's Delimitation: The study was delimited to the subject of English which is one of the core subject taught in district Bannu.

METHODOLOGY

Research Design

There are two variables, academic emotions as a predictor and academic achievement as a criterion, the survey research design was the most appropriate. Because this study was primarily descriptive in nature, therefore a survey research design was applied.

Philosophical Approach of Research Design

Every research project starts with a set of philosophical assumptions. Scholars can utilise research philosophy to help them design a strategy and approach for studying a particular topic (Best and Kahn, 2009). Positivism, Interpretivism, and Pragmatism are three philosophical perspectives in social science (Wohlrapp, 2014). According to the nature of the research problem, the researcher used a Positivism Philosophical approach in this study. The Positivism school of thinking, according to Wilson (2010), argues that factual or raw information can only be achieved through observation and knowledge derived from statistical data. More specifically, positivism favours a quantitative research strategy in which data is analyzed using statistical methods to examine hypothetical statements. Furthermore, the current study included a quantitative approach

as well as a survey research methodology. A survey research design, according to Check & Schutt (2011), is a method in which a researcher distributes an instrument to a group of people (sample) in order to identify the trend in attitudes, beliefs, and behaviours.

Population

After delimiting the work to public higher secondary school students of grade 12 in Bannu, constituted population of the study. The total number of students in the study was 1647.

Sample and Sampling procedure

Two-stage stratified sampling technique was applied in the study. At the 1st stage schools and at the 2nd. Stage public higher secondary school students of grade 12 were selected.

According to BISE Bannu 2021 data, the sampling frame consisted of 34 public higher secondary schools in district Bannu, 18 of which were boys higher secondary schools and 16 of which are girls higher secondary schools, with a total of nearly 1647 students enrolled in grade 12, 1098 of whom are male students and 549 female students. Using the Proportion allocation formula, a sample of 208 male and 104 female students was chosen at five (5) levels of significance from the total population of 312 (Creative Research System—-online sample Calculator).

Formula= $nj = \frac{nj}{N} \times Nj$

Male students Sample size = $nm = \frac{n}{N} \times$

$Nm = \frac{1098}{1647} \times 312 = 208$

Female students Sample size = $nf = \frac{n}{N} \times N f = \frac{549}{1647} \times 312 = 104$

n= is the number of students in the sample.

nm =is the Number of male students in each strata.

N= is the population size.

Nj= denotes the sample size.

Rationale for Selection of the Sample

For this study, a survey research design was considered. Higher secondary school students were chosen for the study because of their ability to respond to the research instrument. They are old enough and in a better position to assess and discuss their feelings and learning emotions in the classroom. As a result, gathering data from public higher secondary schools was deemed the best source for this study, as it provided more relevant and appropriate information.

The Questionnaire's Validity and Reliability

Although the questionnaire was already in its standardized form since due to context difference its content and face validity was reaffirmed through 7 research and psychology experts. Name of the experts were Dr Manzor Hussain Arif, Dr. Umar Ali Khan, Dr. Ikram ullah, Dr. Uzma Syeda Gilani, Dr. javed Mustafa, Dr. Sher Daraz Khan, Dr. Allah Noor. The suggestions of the expert were incorporated.

Reliability of the Questionnaire

According to Anderson and Arsenault (2005), measurement dependability refers to the consistency of results obtained under a variety of settings. Simply said, reliability refers to the measurement's constancy. Fisher (2007) said that a range of .70 to.99 is appropriate for a trustworthy item. Cronbach's Alpha was used to determine the questionnaire's reliability in this study. Following the validation of the instrument, a pilot study was done with 50 students to determine the tool's reliability. The information was loaded into SPSS 24 to calculate the Cronbach Alpha value. The Cronbach Alpha for the Academic Emotions Questionnaire was .87, which indicates that it is quite reliable.

Instrumentation and collection of Data

Collection of data is the systematic gathering of information about a variable of interest in order

to answer the questions posed. Data collection's primary purpose is to obtain high-quality evidence and reliable information about a phenomenon (Olsen, 2011). The researcher conducted this study by visiting different schools and speaking with teachers regarding the current research topic. Data for this research was collected by using the Achievement Emotions Questionnaire (AEQ). Using a scale of 1 for strongly disagreed to 5 for strongly agreed developed by (Reinhard Pekrun, Elliot, & Maier, 2006).

Development of Academic Achievement test

For academic achievement, students' objective type test was developed from first five lessons in the subject of English. Consisting 50 MCQs. Item difficulty of the test was 52.88, means that the test was neither too difficult nor very easy.

Data Analysis

In this research, data on variables such as Class related Academic Emotions (Boredom, Hopelessness, Anger, Anxiety, Enjoyment, and Pride); Test related Academic Emotions (Relief, Hopelessness, Anger, Anxiety, Enjoyment, and Pride); Academic Achievements (Test Score) and Gender were collected through valid and tested questionnaires.

We used SPSS-24 version for data analysis. Results of Descriptive Statistics showing means and variances of the variables, Pearson's Correlation Co-efficient and Regression Co-efficient were calculated.

Ethical considerations

During this course of study, all the ethical principles were followed by the researcher. Data from female students was collected through female subject specialist as desired by the context. Similarly no harm to subjects and consent from all the participants was ensured by the researcher.

Findings

The study's main objective was to discover the relationship between students' academic emotions and their academic achievement. Different tables were created, and different interpretations were made as a result.

Students' academic emotions were measured using a Likert scale. For each statement, there were five possible responses. The ranges below were used for decision making.

Weight	Scale	Numbering	Range of Mean
1	Very Low /SDA	1	1.00-1.80
2	Low/DA	2	1.81-2.60
3	Average/N	3	2.61-3.40
4	High/A	4	3.41-4.20
5	Very High/SA	5	4.21-5.00

Table 1: Descriptive Analysis of Academic Emotions (class-related)

S. No.	Academic Emotions	Mean	Standard Deviation
1	Boredom	2.77	.70
2	Hopelessness	2.80	.68
3	Anger	2.48	.68
4	Anxiety	2.82	.69
5	Enjoyment	3.71	.63

6	Pride	3.08	.67

Table 1 shows descriptive analysis performed on the items of questionnaire of academic emotions (class-related). The mean of enjoyment falls in the range of high and mean of pride, boredom, hopelessness and anxiety fall in the range of average. Similarly, the mean of anger falls in the range of low.

Table 2: Descriptive Analysis of academic emotions (test related)

S. No.	Academic Emotions	Mean	Standard Deviation
1	Relief	3.53	.63
2	Hopelessness	2.54	.67
3	Anger	2.88	.67
4	Anxiety	2.98	.62
5	Enjoyment	3.56	.85
6	Pride	3.08	.67
7	Boredom	2.83	.69

Table 2 presents a descriptive analysis performed on the items of the questionnaire of academic emotions (test related). The mean of relief and enjoyment fall in the range of high and the mean of pride, boredom, hopelessness, anger and anxiety fall in the range of average.

Table No. 3 Correlation between students' academic emotions (class related) and their academic achievement

S.No.	Variable	Pearson Correlation(r)	Sig (p)
1	Boredom	.830	.000
2	Hopelessness	.830	.000
3	Anger	.540	.000
4	Anxiety	.830	.000
5	Enjoyment	.252	.000
6	Pride	.554	.000

* At the 0.05 level of significance, the correlation is significant.

Since the current study is related to investigate correlation between the variables. Therefore, correlation analysis was done to find that, is there any relationship exist between the variables of interest and results were calculated. In Table 3, the results of the correlation are presented. In the table, calculated values of the correlation coefficients for the variables are given. The correlation co-efficient between students' class boredom and academic achievement was found to be r=.215, with a p-value of 0.00 at the 0.05 level of significance, indicating a significant relationship between the two variables. This showed that the two variables were 21%correlated.

The correlation coefficient between students' hopelessness and academic achievement is r=.220, with a p-value of 0.00 at the 0.05 level of significance; the relationship between the variables is 22%.

Students' academic achievement and anger are positively correlated with correlation coefficient value of r= 0.22. This shows that the correlation between the variables is significant at a 0.05 level of significance. The correlation coefficient between students' anxiety and their academic achievement is r= 0.24 , with a p-value of 0.00 at 0.05 level of significance; which means that there is a significant weak positive correlation between students' anxiety and their academic achievement because p<0.05.

The correlation coefficient between students' class Enjoyment and their academic achievement is r=.41, with a p-value of 0.00 at 0.05 level of significance; which means that there is a statistically significant moderate positive relationship between students' class enjoyment and their academic achievement as the p-value is 0.00.

The correlation coefficient between students' test Pride and their academic achievement is r= .23, with a p-value of 0.00, is significant; which means that there is a statistically significant weak positive correlation between students' test Pride and their academic achievement at given significance level.

Table No. 4 Correlation between students' academic emotions (Test related) and their academic achievement

S.No.	Variable	Pearson correlation(r)	Sig (p)
1	Relief	.403	.000
2	Hopelessness	.540	.000
3	Anger	.830	.000
4	Anxiety	.551	.000
5	Enjoyment	.098	.083
6	Pride	.554	.000
7	Boredom	.830	.000

* At the 0.05 level of significance, the correlation is significant.

As shown in table 4, the correlation coefficient between students' test relief and their academic achievement is r=0.054 with a p-value of .339 at the 0.05 level of significance. There is a very positive relationship between students' test relief and their academic achievement at 0.05 level of significance.

The correlation coefficient between students' test hopelessness and their academic achievement is r=.241 with a p value of 0.00 at the 0.05 level of significance. There is a weak positive relationship between students' hopelessness and their academic achievement because the value p< 0.05.

The correlation coefficient between students' test anger and their academic achievement is r=0.24 with a p value of 0.00 at the 0.05 level of significance. There is a statically weak positive relationship between students' test anger and their academic achievement, because the value p<0 .05.The correlation coefficient between students' test anxiety and their academic achievement is r=0.141 with a p value of 0.01 at the 0.05 level of significance, means that there is a very weak positive relationship between students' anxiety and their academic achievement because the value of p< 0.05.

The correlation coefficient between students' test enjoyment and their academic achievement is r=.052 with a p value of 0.36 at the 0.05 level of significance. There is a no relationship between students' enjoyment and their academic achievement at the given p-value.

The correlation coefficient between students' test pride and their academic achievement is r= .235 with a p value of 0.00 at the 0.05 level of significance. There is a weak positive relationship between students' pride and their academic achievement because the p< .05.

The correlation coefficient between students' test boredom and their academic achievement is r=.25 with a p value of 0.00 at the 0.05 level of significance. There is a weak positive correlation between students' test boredom and their academic achievement because the p<0.05.

Table 5: Academic Emotions (Class Version) and academic achievement and Academic Emotions (Test Version) and Academic Achievement

S.No.	Variable	Pearson correlation(r)	Sig (p)
1	Class version	.962	.000
2	Test Version	.961	.000

* At the 0.05 level of significance, the correlation is significant.

As indicated in table 5, the correlation coefficient between students' class version academic emotions and their academic achievement is r=.962 with a p value of 0.00 at the 0.05 level of significance. There is a strong positive relationship between students' class version academic emotions and their academic achievement because the p< .05.

As indicated in table 5, the correlation coefficient between students' Test version academic emotions and their academic achievement is r=.961 with a p value of 0.00 at the 0.05 level of significance. There is a strong positive relationship between students' Test version academic emotions and their academic achievement because p< .05.

Table 6 a: Model summary of linear regression

Model Summary						
IV	**R**	**R^2**	**S.E**	**F**	**Sig.**	**f^2**
AE	.52	.27	9.9	19.63	.000	0.206349

Table 6 b: Regression coefficients

Model	Standardized Coefficients		
	β	**T**	**Sig**
Anger	.167	3.242	.00
Anxiety	.55	2.32	.02
Enjoyment	.38	7.71	.00
Pride	.17	3.52	.00

Table 6 a present a summary of the model in terms of the impact of academic emotions (class related v) on students' academic achievement. Infer from the above evidence the value of R-square .27 is, which indicates that 27% change occurs in dependent variable (students

achievement) due to the predictor variable (academic emotions). The above result reveals that the value of F=19.62 at p=.000 shows that model is acceptable and provides a strong evidence of significance

The model's Cohen f2 value is, 0.20 indicating a medium effect size that is significant at the 0.05.

Table 6 b shows that in model a unit change in academic emotions (class related) anger, anxiety, enjoyment and pride predicts .16,.55, .38, .17 unit change respectively in overall students' academic achievement.

Boredom and hopelessness have been debarred from the model because their results are non-significant. The p >.05.

Table 7 a: Model summary of linear regression

Model Summary						
IV	**R**	**R^2**	**S.E**	**F**	**Sig.**	**f^2**
AE	.440	.19	10.48	10.40	.000	.23

Table 7 b: Regression Coefficients

Model	**Standardized Coefficients**		
	β	**T**	**Sig**
Relief	6.14	4.88	.000
Hopelessness	2.20	2.26	.024
Anxiety	2.18	1.99	.047
Enjoyment	1.40	1.80	.072
Pride	5.84	5.06	.000
Boredom	1.22	.59	.553

Table 7a presents the model summary regarding impact of academic emotions (test related) on students' academic achievement. Infer from the above evidence the value of R^2 (.19) indicates that 19% change occurs in the independent variable (students' academic achievement) due to the predictor variable (academic emotions test related). The above result tells that the value of F=10.40 and p=.000 which shows that model is fit and provides strong evidence of significance.

The model Cohen f^2 value is 0.23, indicating a medium effect size that is significant at the 0.05 levels of significance.

Table 7b shows that in model a unit change in academic emotions (test related) relief, hopelessness, anxiety, enjoyment, pride and boredom predicts 6.14, 2.20, 2.18, 1.40, and 5.58 unit change respectively in overall students' academic achievement.

Anger has been excluded from the model because its result is non-significant. The p >.05

DISCUSSION

Finding of this study revealed that students provided different measurements of their academic emotions they experience during their class and test. Analysis also revealed that students' various academic emotions have different levels of correlation with their academic achievement, like wise different academic emotions effect students' academic achievement differently. The results of the study also revealed that male and female students have diverse level of academic emotions. The different levels of the students' academic emotions related to class and

test can be due to many reasons such as different school contexts, class, home environment. Students interest, teacher personality, teacher methodology and nature of the subject are also the variables that influence students' academic emotions. Results of the study are in consonance with findings of Tyng et al, (2017) who asserts that emotions can also have an impact on one's ability to maintain self-control. Internal and external motivation, as well as flexible learning strategies and self-regulation, are thought to be enhanced by positive emotions such as joy, hope, and pride. As a result, they have a positive effect on academic performance. On the other hand, negative emotions like boredom and hopelessness are known to lower motivation and indicating a negative impact on results. Some academics such as (Goetz et al., (2003) and Rudd, (2012) believe that the emotional impact on students' mental and physical states play an important role in their learning.

Pekrun, (2006) found a poor link between negative academic feelings such as boredom, hopelessness, anger, and anxiety. High associations were found between pleasant academic emotions. This is consistent with the control-value theory of achievement emotions, which states that positive emotions create positive loops in the environment-appraisal-emotions-outcome cycle Positive emotions correlate with one another in a positive feedback loop, and negative emotions correlate with one another in a negative feedback loop.

The results of the data analysis demonstrated a poor link between negative academic feelings such as boredom, hopelessness, anger, and anxiety and other emotions. High associations were found between pleasant academic emotions. This is consistent with the control-value theory of achievement emotions, which states that positive emotions create positive loops in the environment-appraisal-emotions-outcome cycle (R. Pekrun, 2006). Positive emotions correlate with one another in a positive feedback loop, and negative emotions correlate with one another in a negative feedback loop.

Pekrun (2006) further suggests that students are more likely to sense hopelessness than boredom, reflecting frustration in their attempts to comprehend a topic. Students' interest and understanding of the course given in class, as well as their attention and involvement during lectures, were found to be significantly impacted by boredom. As a result, it can be deduced that boredom has a substantial impact on students' interests and comprehension of the course. Additionally, boredom has the ability to influence students' attention and involvement during lectures. To summarize, understanding the academic emotions children experience while learning is critical to assisting instructors and educational planners in developing effective techniques for reaching curricular objectives.

The results of the study that class related academic emotions i.e boredom, hopelessness, anger, anxiety, enjoyment and pride and test related academic emotions i.e relief, hopelessness, anger, anxiety, enjoyment, pride and boredom have positive correlation with students' academic achievement match with the results of Seli et al. 2016; Um et al. 2012 who narrate that emotions spur the interest of students and encourage them to keep studying. They have an impact on what is remembered and learned. Emotions have a crucial role in learning, according to several studies in a variety of domains, including neuroscience, education, and psychology.

Academic emotions affect students' self-regulation, academic learning, and achievement. It is important, for a student if he/she is bored and daydreams in class, or whether he or she is thrilled with and likes the lesson; it is also important whether a student strives for success or is afraid of failing an exam. Everyday a student experiences negative or positive emotions in class or during the test and these emotions prepare and sustain

reactions to significant events and states by supplying motivational and physiological energy, focusing attention and regulating thinking, and generating action-related wishes and intentions. This would imply that emotions can have a significant impact on students' motivations, thoughts, and actions (Pekrun et al., 2002).

The inconsistency among the results of different researches may be because of participant demographic characteristics, such as gender, age, and variations in cultural values, which may have moderated the impact of academic emotions on achievement. We discovered that many effect sizes in earlier empirical investigations were diverse, suggesting that moderators could be crucial. Therefore, we predicted that (a) regional location, (b) age, (c) accomplishment domain match, and (d) gender would all act as moderators of the effects of academic emotions on achievement (Lei, & Cui, 2016).

CONCLUSIONS

This paper has presented investigated the correlation of students' academic emotions, and academic achievement when learning in the class and when taking tests. It was observed that students experience different types of academic emotions during study and this was found to have a significant effect on their academic achievement. However, the paper has pointed out that academic emotions both class related and test related have correlation with students' academic achievement and the types of academic emotions experienced, and the reasons for experiencing such while learning in the classroom and when taking tests.

RECOMMENDATIONS

On the basis of this study the following recommendations are given.

1. School should provide such an environment where the class boredom, anger anxiety could be reduced and class enjoyment can be increased, as students learn in a better way when students enjoy learning. 2. The school should provide a variety of curricular options for students so that they have more options and can choose subjects that match their celebrated academic emotions. Students feel more at ease when they can learn how they want.

3. A curriculum based on academic emotions could be developed for schools, taking into account the various types of academic emotions as well as student individual differences. Because it is capable of resolving a wide range of issues and problems relating to teaching, learning, and test administration.

Limitations

In this research study, the researchers examined the i relationship of students' academic emotions and students' academic achievement in district Bannu. The data collected based on the self-estimation of academic emotions, the actual measurement of the academic emotions can be different. Therefore the generalization of the results of the study to another context should be done with great care.

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