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Study and Analysis of Students Emotions with Respect To Perception of Learning in a Class

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Abstract: *Emotions are of great educational values in the teaching learning process. Teaching depends upon emotions for the motivation of perception of learning. Today most of the students do have the access of internet and they get the latest information related to their subject. We found students are less interested to attend their classes. The objective of the study is to understand and analysis the emotions of the students in a class. The study has been undertaken using a group of students in various local technical colleges of Jammu province. In each college heterogeneous group of students has been selected to fill up a questionnaire designed by the researcher for getting their views about different emotions depicted while attending a lecture in a class. The paper investigates emotions of happiness, anger, fear, sad, disgust, surprise, and neutral among students in a class and their depiction in the perception of learning (POL) and lecturer-student interaction (LSI). It also strives to find if there are gender differences in class emotions and perceived learning. The study sample consists of 279 (186 males & 93 females) students of technical colleges of Jammu province. The results indicated that there are differences between males and females in class emotions except in the sadness. The results also reveal that there are no significant differences between males and females in perception of learning in favour of males. On the other hand, it has been observed that emotions accounted for 83.4 % variance of the students' perception of learning. The findings also reveal that there are differences between emotions and lecturer-student interaction in favour of males in achievement and class emotions neutral predicted 74 % variance of the lecturer-student interaction. The results also show that both lecturer- student interaction (LSI) and class emotions accounted for 89.1% of the variation in perception of learning (POL). Furthermore, the present findings highlight the significance of emotional experienced in enhancing learning outcomes in students.*

Keywords: *Class Related Emotions, Lecturer-Student Interaction, Perception Of Learning.*

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I. Introduction

Learning outcomes such as cognitive, affective, motivational and physiological components are very important. Traditionally teachers are used to concentrating on the cognitive side and neglect the affective domain, though emotions are important as an output and input for learning and come forward at the beginning of the learning process. Academic achievement flourishes with emotions such as happiness of learning, anger, fear, sadness, disgust, surprise and neutral. These emotions are critically important for students' motivation, learning, performance, identity development, and health (Schutz & Pekrlln, 2007). This paper concentrates on the everyday college class academic emotions of happiness, anger, fear, sadness, disgust, surprise and neutral. In this study, emotions are investigated in the context of perception of learning. In addition, this study provides evidence that the different emotions of technical college students experience before, during and after the class are also related to academic achievement. This study expands the literature on achievement emotions by extending research to college students.

During the process of learning, students go back and forth between cognition and affect, at times experiencing both at the same time. It is important to remember that the students are not machines but also human beings, they have the emotions that can enhance as well as complicate their understanding the course or achievement. Then focus of this study is on the students' emotions in the classroom; what are the emotions they have before starting the class, during and after finishing the class and how these emotions influence on their perception of learning and lecturer-student interaction. These emotions include students' happiness, anger, fear, sadness, disgust, surprise and neutral . According to research in education, psychology, and English, students do not learn without emotion. They may feel overwhelmed or nervous, frustrated or excited, confident or confused, relieved or bored, or a host of other feelings. We cannot deny that when we value something, we rely on our emotions and experiences as more than just reference points, yet some, or even more than some rely on their

emotions as well, while we expect the students to rely on their thinking and minds: they are used as an inherent part of the decision-making process. Students, as responders to their teachers in the class, depend on their emotions when they read, write or listen, regardless of whether they are conscious of that connection between their emotions and their achievement or not. And students, in most cases, are emotionally invested in their achievement. According to the researcher's teaching experience, some technical college students of Jammu as they learn technical subjects, have different emotions towards learning such subjects, mostly negative, such as anxiety, nervousness, and frustration and have low spirits to learn and many other negative emotions that can hinder their academic achievement. Therefore, if we know these negative emotions, we may help them to overcome these negative emotions and improve their achievement in all the subjects. Some teachers can create in the classroom a welcoming and relaxing environment where psychological needs are met and language anxiety is kept to a minimum (Oxford & Shearin, 1994). But on the other hand some teachers can't. And so, during their classes students find the class a very annoying, boring class instead of the opposite. So the student who has negative emotions towards learning is more likely to have a low result in his/her studies. Yet, other students who are fully interested and passionate about learning would probably do the impossible to learn it. They are more likely to get a high result. But even some of those passionate students that don't get high achievement due to some circumstances, would still have the power, ability, passion, and love to learn it later. They will also use it in their future even if it's just used between family members.

Academic Emotions and Its Definition

Positive and negative emotions are significant for learning. However, negative emotions have been more researched than the positive ones. Traditionally, emotions have been kept separate from learning or considered understated (Ford, 1992, pp. 143-144; Lange & Wilenius, 1997; Schutz & Decuir, 2002, p. 127) although actual learning in the absence of any contact with the learner's emotional level is not likely to occur (Meyer & Turner, 2002, pp. 107-108; Puolimatka, 2004). Generally, academic emotions are emotions which are experienced in an academic context. We identified three situations typically associated with academic achievement (1) before attending a class, (2) during the class, (3) after attending a class .In these circumstances emotions can arise either due to the nature of the tasks to be completed or due to the expected outcome (Pekrun, Goetz, Titz, & Perry, 2002). Research has shown that emotions play a significant role in the learning process and academic achievement (Randler, Glaser-Zikuda, Vollmer, & Mayring, 2011). In line with contemporary component process models of emotions (Scherer, 2009), the control value theory views emotions as sets of interrelated psychological processes, whereby affective, cognitive, motivational, and physiological components are of primary importance. The control value theory provides an integrative approach for analyzing various emotions experienced in achievement contexts, including academic settings as well as achievement situations in other life domains (e.g., sports, professional activities). The theory builds on assumptions from expectancy value theories of emotions (Pekrun, 1992; Turner & Schallert, 2001). Achievement emotions are defined as emotions that are directly linked to achievement activities or achievement outcomes. The definition proposed by the control value theory implies that activity emotions pertaining to current achievement related activities are also considered as achievement emotions. Examples are students' enjoyment of learning, boredom experienced during classroom instruction, or anger at the task demands of academic learning (Pekrun, 2006; Pekrun, Goetz, Daniels, Stupnisky, & Perry, 2010). Dickinson (1987) describes it as being concerned with the learner's attitude towards the target language and users of it, and with his/her emotional responses. Govaerts and Gregoire (2008) have posited that emotions are short and intense subjectively experienced feeling states related to a specific context.

Psychologically and educationally Arnold (1999) defines affect as aspects of emotion, feeling, mood or attitude which condition behavior. It can be seen that the term "affect" sometimes replaced by "emotions", "feelings" or "affectivity". However, from the aspect of language teaching, Apelt and Koering (1997) demonstrate that affectivity is the totality of all components of foreign-language instruction that influence the emotional attitude toward learning a foreign language and toward using it, as well as the foreign language atmosphere in general and the success of the learning and teaching process in particular. Emotions are defined as coordinated, multi-component processes of affective, cognitive, motivational, and expressive psychological systems (Pekrun, 2006).

Academic Emotions and Gender

As emotions influence career choices, it is important to examine gender differences in emotional experiences, especially given our society's current interest in encouraging women to enter traditionally male dominated mathematics and science fields (Frenzel et al., 2007). This was supported by Pekrun et al. (2007), who showed that the relationship between males' emotions toward mathematics and females' emotions toward mathematics were structurally equivalent. Nonetheless, females reported lower enjoyment in and higher anxiety and shame towards mathematics than males.

Class Emotions as Predictors of perception of learning.

Researchers repeatedly have stressed the pivotal role emotions play on students' learning and have voiced concerns about the need to investigate students' emotions in the context of classrooms and schools (Goetz, Pekrun, Hall, & Haag, 2006; Goetz, Preckel, Pekrun, & Hall, 2007; Linnenbrink, 2006; Meyer & Turner, 2006; Pekrun, 2006; Pekrun, Elliot, & Maier, 2006; Schutz & DeCuir, 2002). However, more and more teachers and researchers emphasize that affective factors of students in English learning should be concerned in the college English classroom. Teachers should develop students' positive affection to learn English, making sure of the full participation of all students (Xu & Huang, 2010). Pekrun, Goetz, Titz and Perry (2002) established that students who experience positive activating emotions, that strengthen motivation and enhance flexible learning, have increased achievement. The findings of their study demonstrated a connection between academic emotions and students' learning and achievement, in which positive emotions predicted higher achievement and likewise, negative emotions predicted lower achievement. Goetz et al. (2006) have delineated "academic emotions" as "emotions that are directly linked to learning, classroom instruction, and achievement" (p. 290). Pekrun et al. (2002) further outlined four categories of emotions relating to student performance, namely (a) "positive activating emotions", (b) "positive deactivating emotions", (c) "negative activating emotions", and (d) "negative deactivating emotions" (p. 97). Xu and Huang (2010) mentioned that emotions which affect language acquisition can be classified as personality factors and factors between learners themselves and their relationship with teachers. Personality factors involve self-esteem, motivation, anxiety, and inhibition while the other involves empathy, classroom transactions and cross-cultural processes. Among these factors there are positive ones which can encourage learners and negative ones as well which will be hindrance to English learning such as anxiety, sadness. They added that many teachers and researchers emphasize that affective factors of students in English learning should be concerned in the college English classroom. Teachers should develop students' positive affection to learn English, make sure full participation of students. Brown (2000), too, has believed that "learning arouses emotions and emotions arouse learning. What is still unknown are issues like the extent to which emotion is a necessary catalyst which enables learning, and the factors which enable the constructive use of emotions for effective learning" (p. 288). Both positive and negative emotions can influence students' learning. Negative emotions, such as anxiety, boredom, and hopelessness correlate negatively with interest and effort, whereas positive emotions, such as enjoyment and hope, correlate positively with the motivational variables (Pekrun, Goetz, Titz, & Perry, 2002). Pekrun, Elliot and Maier (2009) suggested that achievement emotions are determined by the perceived controllability of achievement activities and their outcomes, as well as the value of these activities and outcomes. On a self-report instrument for college students, anxiety was the most commonly reported emotion and positive emotions were reported almost as often as negative emotions (Pekrun et al., 2002).

When students express emotions, instructors need to respond accordingly in order to keep the students in as positive a state of mind as possible. Furthermore, in order to teach effectively, instructors have to control their emotions both in the process of becoming accustomed to the new system and in perceiving the emotional responses of students (Wang, 2014). In most studies, anxiety, interest, boredom, enjoyment, and other emotions have been analyzed independently. Few investigations have systematically examined combined effects (Huang, 2011). As academic emotions have become a central focus in the education of students, it is essential to better understand what emotions students feel in the class. only anxiety (Schutz & Pekrun, 2007), enjoyment (Frenzel, Pekrun, & Goetz, 2007). Enjoyment and pride were both positive predictors of grades. For students who report higher levels of both positive emotions, self-regulation was positively associated with grades. However, for those who report lower levels of pride, self-regulation was not related to grades; and, for those who reported lower levels of enjoyment, self-regulation was negatively related to grades (Villavicencio & Bernardo, 2013). Research has shown how academic emotions are related to achievement and to cognitive/motivational variables that promote achievement (Villavicencio & Bernardo, 2013). Language class performance positively predicted enjoyment in language classes, and negatively predicted enjoyment in mathematics classes (Goetz, Frenzel, Hall, & Pekrun, 2008). From the literature review, it was concluded that very little research has been completed on emotions in connection to jammu students. In this study, the researcher investigated the seven academic emotions in the context of perception of learning, lecturer-student interaction and gender in college students.

Academic Emotions and lecturer-student interaction

Among the various contextual factors posited to influence student engagement, teacher-student interaction (also studied as teacher support and teacher-student relationship) has received substantial support for being the strongest predictor of engagement and the most significant contributor of academic outcomes (e.g., Lam et al., 2012). Past studies examining various aspects of this contextual factor have generally identified a good quality teacher-student interaction to be characterized by high levels of emotional (Fraser & Fisher, 1982; Patrick, Ryan, & Kaplan, 2007), academic, autonomy support, (Skinner & Belmont, 1993) and provision of

structure (Jang, Reeve, & Deci, 2010); which have in turn been positively associated with engagement of individuals. Skinner et al. (2008) for instance, found student reports of teacher support (i.e., involvement, structure, autonomy support) to be predictive of increases in emotional engagement and declines in emotional disaffection across the year. Likewise, a longitudinal study by Skinner and Belmont (1993) found teacher involvement (similar to emotional support) to predict emotional engagement in elementary school students. However, both these studies were conducted on young children for whom teacher support is generally regarded as critical (Birch & Ladd, 1997). Hence, whether this contextual factor plays as much an important role among under graduate students is yet to be established through further research.

II. Study Area

Many Jammu students have negative emotions towards learning technical subjects such as sadness and anger that has built up in response to negative past experiences in technical subjects. It is unclear how achievement goals and achievement emotions are related; or how these goals and emotions may influence academic performance (Pekrun et al., 2009, p. 115). Therefore there was a need to study the extent to which academic emotions could be predicted by academic achievement. In the field of educational psychology, research on feelings is lacking, and what does exist has focused more on negative rather than positive feelings. A classroom is not a desert of emotions, in some way or another it is slanted by happiness, anger, sadness, fear,disgust,surprise and neutral. Emotions are a part of the human experience and should be regarded just as important as the learning process. If students' emotions aren't considered during his/her study of the subjects, it might lead to a lack of communication and understanding between the teacher and student. Not just so, but as well, it will lead to a lack of happiness and motivation during class. And even worse, it will lead to frustration and irritation. According to this researcher's personal experiences, lack of consideration for students' emotions can lead to anger and no interest of going to school or college. Reid and Hrekso (1981) assured that it is important to consider what happens internally to a person who is learning and to view learning as construction. The learner is the most important element in teaching-learning situation; not materials, lessons, or other factors external to the learners. So the current study focuses on the students' class emotions, to know what are the feelings they have before, during and after studying technical subjects and the effects of their emotions on their perception of learning. No study to date has examined technical students' class emotions and its perception of learning and lecturer-student interaction, especially in Jammu province. In addition, according to my teaching experience of more than twelve years, it has been observed that some teachers are teaching the students without considering their students' emotions, concentrating only on how to finish the syllable, prepare exams, preparing the class sheets ….etc. They have forgotten that learners need a special treatment to make them accept and overcome the negative emotions that the students encounter during their learning technical subjects, especially in Jammu. Those students encounter many barriers to learning technical subjects; for example, some families do not encourage the students to learn technical subjects, their past school learning before entering the university did not focus so much on such subjects. So those students need a special focus on their emotions and their teachers need to be aware of their students' emotions; negative and positive. So, emotions should not be kept away, they should come forward at the beginning of the learning process. So basically, this is one of the reasons that aroused the researcher to do this research. Another reason for doing this research, though the importance of the emotions and its effect on the students' perception of learning and lecturer-student interaction in context to academic achievement little is known about the topic in the Jammu and Kashmir, especially in Jammu province.

According to the literature review, most studies have focused on negative emotions such as anxiety (Pekrun et al., 2002; Pekrun, Elliot, & Maier, 2009; Schutz & Pekrun, 2007) and others focused on relationships between students and teachers. In other words, there is little emphasis on the emotional components and the area on which I plan to focus in this study. Another reason is that there is a good relationship between emotions and achievement that emotions facilitate the thinking process and learning motivation that help the students to achieve well. Finally, according to the researcher's knowledge and Google researches, no study to date has combined the theoretical framework, independent variables (seven class emotions, lecturer-student interaction), the dependent variable (perception of learning), sample population (technical students of Jammu province), have been done in Jammu related to this subject. So this study has been conducted to fill in this empty gap.

The fundamental research questions are the following:

(1). Are there any differences between in class emotions according to the gender.
(2). How much the student's perceived leaning explains student emotions.
(3). How much good or poor lecturer- student interaction explains student emotions.
(4). How much perceived learning of student explains quality of lecturer- student interaction and emotions in class.

Hypothesis of the current study

Hypothesis one: There are differences between males and females in class emotions.

Hypothesis two: There are significant mean differences in class emotions in perception of learning.
Hypothesis three: Lecturer- student interaction (LSI) can predict class emotions according to the gender.
Hypothesis four: The perceived learning can predict quality of lecturer-student interaction and class emotion in gender.

III. Purpose And Significance Of The Study

The purpose of this study was geared towards students of technical college of Jammu province regarding class emotions before, during and after attending the class lecture and their perceived learning. The insights gained from this study can contribute to a better understanding of the class emotions and their effects on their achievement. Moreover, this study helps the teachers to know what the emotions that can predict or cannot predict the students' achievement and which ones have the biggest effect on their achievement. This study helps also the teachers and educators to know how the academic emotions are related to the learner variables such as, gender and perception of learning and lecturer-student interaction. In addition, educators can apply this knowledge to create environments that reduce negative emotions and thus better enable students to demonstrate their knowledge. Understanding the extent to which achievement emotions could predict performance can support the development of appropriate instructional strategies to help and support Jammu students in learning technical subjects. Educational practitioners could benefit from the results of this study, which could in turn impact policy change with regards to considering the importance of emotions in the educational field.

IV. Research Model

With extensive literature review and focus group discussions, a detailed conceptual model of research has been developed. The model has found helpful in analyzing the differences in class emotions of male and female and how much student perceived learning explains student emotions. This model has explains good or poor lecturer-student interaction effect students emotion and also the effect of both lecturer -student interaction and student emotions predict perception of learning. Figure 3.1 helps us in understanding the same.

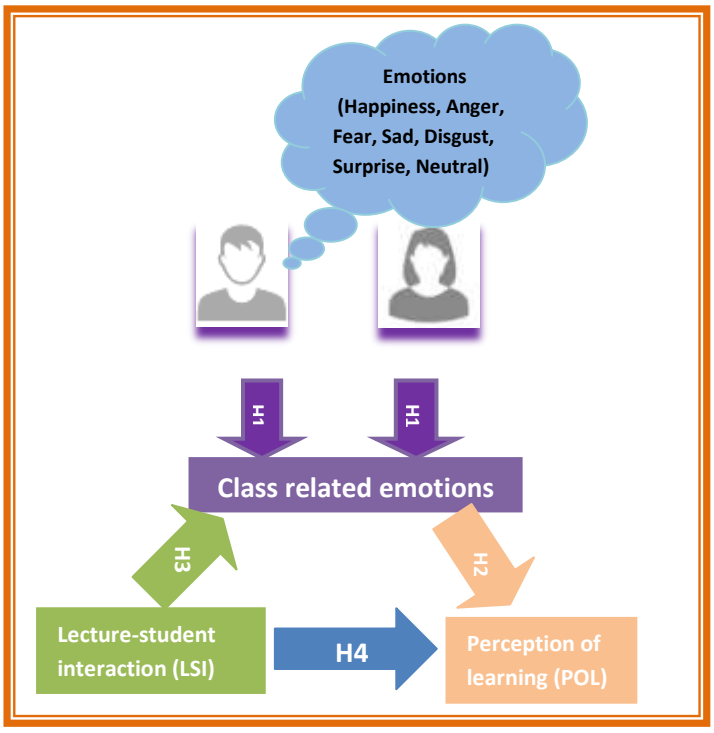

Figure 3.1: Research Model- student emotions role in perception of learning and lecturer- student interaction

V. Methodology

Pilot Study

The questionnaire included key measures: demographics , student related emotions questions, perception of learning questions and lecturer-student interaction questions and lastly the Preliminary draft of each questionnaire was pre-tested on 40 students which helped in improving upon the questions and then final questionnaires were framed which have been appended. The questionnaire has been tested for reliability with

calculating cronbach's alpha. For all the sections, cronbach's alpha was more than 0.6 and hence the research instrument is considered reliable for study.

Participants

The sample size was so selected that it could be adequate enough to represent the whole population, and also help in meaningful comparison between the emotions of male and female students. The sample size used is 279 respondents (186 male and 93 female). The selected students from 4 different technical colleges of Jammu province in the age- group 19-22 years.

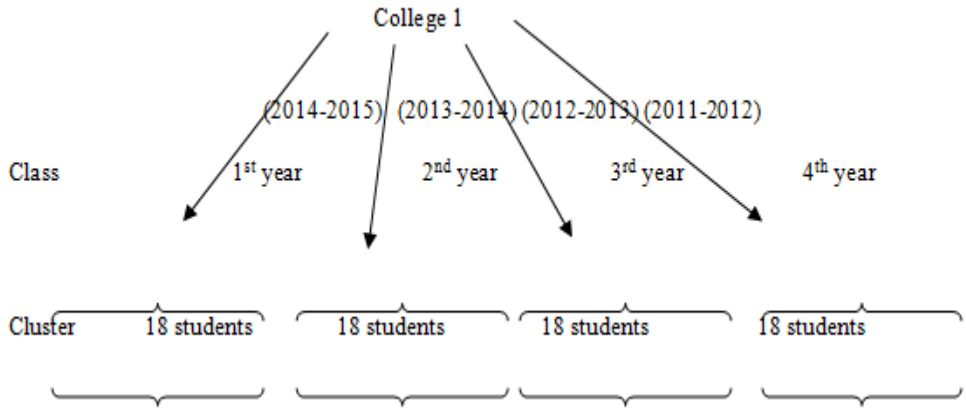

Figure 3.2: Cluster Sampling Structure in one college

Student related emotion Questionnaire

The student related emotion scale includes 34 Questions and two Positive student related emotions (Happiness and Surprise) and five Negative student related emotion (Anger, Sad, Fear, Disgust and Neutral). The items of the scales pertain to the 4 different emotion component subscale within emotions (Affective, Cognitive, Motivational and physiological) in the Question. Questionnaires are presented in 3 blocks, pertaining to emotional feeling experienced before, during and after being in class.

In this study the student related emotion scale includes 34 Questions and these Questions are divided into 7different category. The Happiness subscale includes 9 Questions (Q1, Q3, Q4, Q5, Q11, Q14, Q23, Q25, and Q26). Anger subscale includes 3 Questions (Q10, Q22 and Q33). Fear subscale includes 5 Questions (Q6, Q8, Q20, Q24 and Q34). Sad subscale includes 6 Questions (Q2, Q7, Q9, Q15, Q16, and Q32). Disgust subscale includes 2 Question (Q12 and Q13). Surprises subscale includes 4 Question (Q21, Q29, Q30 and Q31).Neutral subscale includes 5 Question (Q17, Q18, Q19, Q27 and Q28).Further ,we have chosen 4 questions for perception of learning(POL)include (Q17, Q18, Q19, Q20) and 4 questions for lecture student interaction include(Q27 ,Q28 Q29, Q30).Students are asked to rate their emotional experiences on a 5 point Likert scale "Strongly Disagree" (1) to "Strongly Agree" (5) (see appendix A).

Validity and reliability of scale

Each and every question of student related emotion questionnaire were thoroughly examined and found that content of each item was related with the objectives of the study. In order to check the validity of scales, construct validity was used and accordingly ANOVA analysis has done. Seven emotions (happiness, anger, fear, sad, disgust, surprise, neutral) were identified along with affect of two dimensions perception of learning and lecturer-student interaction has identified. The internal consistency was high for the total questionnaire ($\alpha = 0.78$).

VI. Results And Analysis

Result and Analysis of hypothesis one.

- There are differences between males and females in class emotions.

Below table describes a detailed description of mean differences, variance and standard deviation of male students.

TABLE 1 : Description Data Of Student Related Emotions In Gender(Male)

Class emotions	**Count**	**Sum**	**Average**	**Variance**	**SD**
Happiness	186	2469	13.274	7.767	2.787
Anger	186	1748	9.397	6.121	2.474
Fear	186	2412	12.967	7.544	2.746
Sad	186	3424	18.408	16.869	4.107
Disgust	186	1162	6.247	3.560	1.886
Surprise	186	2497	13.424	9.261	3.043
Neutral	186	3029	16.284	14.723	3.837

From above table 1, the happiness and surprise emotions do not differ significantly and all other pairs of emotions differ significantly. Since the mean (M=18.4086, SD=4.107308) for the class emotion sad is much higher in males than the neutral emotions. The anger and disgust emotions in male are much lower than as compared to fear, surprise and happiness class emotion in male.

TABLE 2:ANOVA Analysis Of Difference in Class Emotions of Male Student

ANOVA					
Source of Variation	SS	Df	MS	F	P-value
Males students	3404.999	185	18.405	2.327	0.000
Class emotions	18364.42	6	3060.736	387.068	0.000
Error	8777.296	1110	7.907		
Total	30546.71	1301			

From table 2, the critical value (tabulated) value of F for (185, 1110) *d.f* at 5% level of significance is 1.19.Since the calculated value of test statistics of male students is F=2.32 is greater than the critical value (1.19), it is significant. This means that the data provide sufficient evidence against the null hypothesis which may, therefore, be rejected at 5% level of significance. Hence, we may conclude that there is significant difference between the male students.

From table 2, the critical value (tabulated) value of F for (6, 1110) *d.f* at 5% level of significance is 2.10.Since the calculated value of test statistics of class emotions is F=387.06 is very much greater than the critical value (2.10), it is highly significant. Hence, we reject the null hypothesis at 5% level of significance and conclude with 95% confidence that there is significant difference between the class emotions.

Below table describes a detailed description of mean differences, variance and standard deviation of female students.

Table 3 : Description Data Of Student Related Emotions In Gender(Female)

Class emotions	Count	Sum	Average	Variance	SD	
Happiness	93	1217	13.086	12.057	3.472	
Anger	93	899	9.666	6.507	2.550	
Fear	93	1133	12.182	10.694	3.270	
Sad	93	1712	18.408	19.287	4.391	
Disgust	93	577	6.204	4.794	2.189	
Surprise	93	1197	12.870	10.613	3.257	
Neutral	93	1512	16.258	18.389	4.288	
TABLE4:ANOVA analysis Source of Variation	SS	df	MS	F	P-value	F crit
Female students	1922.618	92	20.898	2.040	0.000	1.282
Class emotions	9028.611	6	1504.769	146.933	0.000	2.114
Error	5653.103	552	10.241			
Total	16604.33	650				

From table 4, the critical value (tabulated) value of F for female students are (92, 552) *d.f* at 5% level of significance is 1.28.Since the calculated value of test statistics of female students is F=2.04 is greater than the critical value (1.28), it is significant. This means that the data provide sufficient evidence against the null hypothesis which may, therefore, be rejected at 5% level of significance. Hence, we may conclude that there is significant difference between the female students.From table 4, the critical value (tabulated) value of F for class emotions are (6, 552) *d.f* at 5% level of significance is 2.11.

Since the calculated value of test statistics of class emotions is F=146.93 is very much greater than the critical value (2.11), it is highly significant. Hence, we reject the null hypothesis at 5% level of significance and conclude with 95% confidence that there is significant difference between the female class emotions.From table 3, hence, the fear and surprise emotions do not differ significantly and all other pairs of emotions differ significantly. Since the mean (M=18.408, SD=4.391) for the class emotion sad is much higher in females than the neutral emotions. The anger and disgust emotions in female are much lower than as compared to fear, surprise and happiness class emotion in male.Hence, from this analysis, we observed that class related emotion (sadness)is equal in both male and female students.

Results and Analysis of hypothesis two.

- There are significant mean differences in class emotions in perception of learning.

Table 5: Descriptive Data According To Gender And Perception Of Learning

Study Variables	Gender	N	Mean	Variance	Std.dev
Perception of Learning(POL)	males	186	13.048	10.965	3.311
	females	93	13.043	14.368	3.790
	total	279	13.047	12.052	3.472
Happiness	males	186	13.274	7.768	2.787
	females	93	13.086	12.058	3.472
	total	279	13.211	9.167	3.028
Anger	males	186	9.397	6.122	2.474
	females	93	9.666	6.507	2.551
	total	279	9.487	6.244	2.499
Fear	males	186	12.968	7.545	2.747
	females	93	12.183	10.694	3.270
	total	279	12.706	8.697	2.949
Sad	males	186	18.408	16.870	4.107
	females	93	18.408	19.288	4.392
	total	279	18.408	17.609	4.196
Disgust	males	186	6.247	3.560	1.887
	females	93	6.204	4.795	2.190
	total	279	6.232	3.956	1.989
Surprise	males	186	13.424	9.262	3.043
	females	93	12.870	10.614	3.258
	total	279	13.240	9.744	3.122
Neutral	males	186	16.284	14.724	3.837
	females	93	16.258	18.389	4.288
	total	279	16.275	15.884	3.985

Table 6: ANOVA For Gender Difference In Perception Of Learning And Class Related Emotions.

Study Variables		SS	Df	MS	F	P-value	F crit	Eta Square
	Between Groups	1.376	3	0.459	0.369	0.776	2.613	
POL	Within Groups	1384.222	1112	1.245				
	Total	1385.599	1115					
	Between Groups	3.792	1	3.792	0.357	0.550	3.858	
Happiness	Within Groups	5898.918	556	10.610				
	Total	5902.710	557					
	Between Groups	1767.113	1	1767.113	193.176	0.000	3.858	0.25
Anger	Within Groups	5086.100	556	9.148				
	Total	6853.213	557					
	Between Groups	16.174	1	16.174	1.559	0.212	3.858	
Fear	Within Groups	5768.294	556	10.375				
	Total	5784.468	557					
	Between Groups	4010.781	1	4010.781	270.440	0.000	3.858	0.32
Sad	Within Groups	8245.814	556	14.831				
	Total	12256.595	557					
	Between Groups	6476.346	1	6476.346	809.134	0.000	3.858	0.59
Disgust	Within Groups	4450.251	556	8.004				
	Total	10926.597	557					
	Between Groups	5.226	1	5.226	0.480	0.489	3.858	
Surprise	Within Groups	6059.305	556	10.898				
	Total	6064.530	557					
	Between Groups	1454.841	1	1454.841	104.156	0.000	3.858	0.15
Neutral	Within Groups	7766.143	556	13.968				
	Total	9220.984	557					

Table 5 shows that there are significant mean gender differences between males (M=13.048, SD=3.311) and females(M=13.043,SD=3.790) in perception of learning in favour of males. it also shows that given the scoring of the variable gender, ANOVA analysis for gender shows that males reported higher levels of disgust emotions and Eta square=0.59 and this means that gender explains 59% from the variance of disgust emotion. Smilarly, both males and females reported higher level of sadness and Eta square=0.32 and the gender explains 32% from the variance of sadness. in case of anger, females reported higher levels s and Eta square=0.25 and this means that gender explains 25% from the variance of anger .ANOVA analysis also shows

that females reported higher levels neutral emotion and Eta square=0.15 and this means that gender explains 15% from the variance of neutral emotion.

Table 7: Correlation between academic emotions and perception of learning (POL) (n=279)

	Happiness	Anger	Fear	Sad	Disgust	Surprise	Neutral
POL	0.652	-0.147	0.034	-0.167	-0.221	0.814	0.805

Table 7 shows that there are significant correlations at the level of 0.05 between perception of learning(POL) and academic emotions except in fear ($p<0.05$).The higher the perception of learning, the more happiness, surprise, neutral there is, but there is less anger, sad and disgust.

Table 8: Model summary(n=279)

Study variable	**Multiple R**	**R Square**	**Adjusted R Square**	**Standard Error**
Perception of learning	0.913	0.834	0.830	1.433

The table 8 shows that R= 0.913 and R2 = 0.834, this means that emotions explain 83.4% in variance of perception of learning. This means that class emotions play an important role in the perception of learning.

Table 9: Anova regression analysis of academic emotions in perception of learning

	Df	SS	MS	F	Significance F
Regression	7	2793.808	399.115	194.328	0.000
Residual	271	556.587	2.054		
Total	278	3350.394			

Table 9 shows that class emotions can predict student achievement F 7,271)=194.328,P<0.01.regression analysis for academic emotions as predictors of perception of learning data resulted in R Square of R^2 =0.834, which shows that the academic emotions accounted for 83.4% percent of the variance of perception of learning. Since F(7,271)=194.328,P<0.01, was significant, it means that class emotions contributed significantly in the perception of learning. It was concluded that class emotions make a significant contribution and can be used as predictor of perception of learning.

Table 10: coefficients of regression

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-1.191	0.685	-1.739	0.083	-2.539	0.157
Happiness	0.097	0.041	2.361	0.019	0.016	0.178
Anger	-0.031	0.044	-0.693	0.489	-0.118	0.057
Fear	-0.085	0.035	-2.421	0.016	-0.154	-0.016
Sad	0.037	0.029	1.288	0.199	-0.019	0.093
Disgust	-0.045	0.055	-0.816	0.415	-0.154	0.064
Surprise	0.565	0.036	15.632	0.000	0.494	0.636
Neutral	0.396	0.031	12.769	0.000	0.335	0.458

Table 10 shows that some class emotions (happiness, fear, surprise and neutral) can predict significantly the perception of learning(POL=-1.191+0.097 happiness -0.085 fear+0.565 surprise+0.396 neutral).

VI. Results and Analysis of hypothesis third.

- Lecturer- student interaction (LSI) can predict class emotions according to the gender.

Table 11 : Descriptive data according to gender

Study Variables	**Gender**	**N**	**Mean**	**Variance**	**Std.dev**
LSI	Males	186	13.010	4.710	2.170
	females	93	12.548	5.248	2.291
	Total	279	12.856	9.210	3.035
Happiness	Males	186	13.274	7.768	2.787
	females	93	13.086	12.058	3.472
	Total	279	13.211	9.167	3.028
Anger	Males	186	9.398	6.122	2.474

	females	93	9.667	6.507	2.551
	Total	279	9.487	6.244	2.499
Fear	Males	186	12.968	7.545	2.747
	females	93	12.183	10.694	3.270
	Total	279	12.706	8.697	2.949
Sad	Males	186	18.409	16.870	4.107
	females	93	18.409	19.288	4.392
	Total	279	18.409	17.609	4.196
Disgust	Males	186	6.247	3.560	1.887
	females	93	6.204	4.795	2.190
	Total	279	6.233	3.956	1.989
Surprise	Males	186	13.425	9.262	3.043
	females	93	12.871	10.614	3.258
	Total	279	13.240	9.744	3.122
Neutral	Males	186	16.285	14.724	3.837
	females	93	16.258	18.389	4.288
	Total	279	16.276	15.884	3.985

Table 12: ANOVA For Gender Differences In lecturer- student interaction (LSI) and Class Emotions.

Study variable		SS	df	MS	F	P-value	F crit	Eta square
	Between Groups	13.530	3	4.510	3.681	0.012	2.613	0.01
LSI	Within Groups	1362.287	1112	1.225				
	Total	1375.816	1115					
	Between Groups	17.565	1	17.565	1.912	0.167	3.858	0.00
Happiness	Within Groups	5108.789	556	9.188				
	Total	5126.353	557					
	Between Groups	1583.513	1	1583.513	204.944	0.000	3.858	0.27
Anger	Within Groups	4295.971	556	7.727				
	Total	5879.484	557					
	Between Groups	3.161	1	3.161	0.353	0.553	3.858	0.00
Fear	Within Groups	4978.165	556	8.954				
	Total	4981.326	557					
	Between Groups	4300.002	1	4300.002	320.668	0.000	3.858	0.37
Sadness	Within Groups	7455.685	556	13.410				
	Total	11755.686	557					
	Between Groups	6120.258	1	6120.258	929.713	0.000	3.858	0.63
Disgust	Within Groups	3660.122	556	6.583				
	Total	9780.380	557					
	Between Groups	20.518	1	20.518	2.165	0.142	3.858	0.00
Surprise	Within Groups	5269.176	556	9.477				
	Total	5289.694	557					
	Between Groups	1631.032	1	1631.032	129.996	0.000	3.858	0.19
Neutral	Within Groups	6976.014	556	12.547				
	Total	8607.047	557					

Table 11 shows that the significant mean gender differences in class emotion scores between individuals in the poor and good lecture student interaction conditions in which males (M=13.010,SD=2.170) and females(M=12.548,SD=2.291) in the good lecture student interaction(LSI) as compared to females. The above table 12 shows that Eta square =0.01 and this means that gender explains 1% from the variance of lecture student interaction (LSI) at the level 0.05 level of significance. it also shows that given the scoring of the variable gender, ANOVA analysis for gender shows that males reported higher levels of disgust emotions in LSI and Eta square=0.63 and this means that gender explains 63% from the variance of disgust emotion. Similarly, both males and females reported higher level of sadness in LSI and Eta square=0.37 and the gender explains 37% from the variance of sadness. in case of anger, females reported higher levels in LSI and Eta square=0.27 and this means that gender explains 27% from the variance of anger .ANOVA analysis also shows that females reported higher levels neutral emotion in LSI and Eta square=0.19 and this means that gender explains 19% from the variance of neutral emotion.

Table 13: Correlation between lecturer- student interaction and class emotions(n=279)

	Happiness	*Anger*	*Fear*	*Sad*	*Disgust*	*Surprise*	*Neutral*
LSI	0.490	-0.003	0.120	-0.137	-0.104	0.468	0.859

Table 13 shows that there are significant correlations at the level of 0.05 between lecture student interaction(LSI) and academic emotions except in anger ($p<0.05$).The higher the good of LSI, the more happiness, surprise, neutral and fear there is, but there is less sad and disgust.

Table 14: Model Summary

Class emotions	Multiple R	R Square	Adjusted R Square	Standard Error
Happiness	0.490	0.240	0.237	2.645
Anger	0.003	0.000	-0.004	2.503
Fear	0.120	0.014	0.011	2.933
Sad	0.137	0.019	0.015	4.165
Disgust	0.104	0.011	0.007	1.982
Surprise	0.468	0.219	0.216	2.764
Neutral	0.859	0.738	0.737	2.043

Table 15: ANOVA regression analysis of academic emotions

Study variables		Df	SS	MS	F	Significance F	Eta Square
	Regression	1	610.736	610.736	87.303	0.000	0.24
Happiness	Residual	277	1937.787	6.996			
	Total	278	2548.523				
	Regression	1	0.012	0.012	0.002	0.965	0.00
Anger	Residual	277	1735.694	6.266			
	Total	278	1735.706				
	Regression	1	34.742	34.742	4.038	0.045	0.01
Fear	Residual	277	2383.157	8.603			
	Total	278	2417.900				
	Regression	1	91.367	91.367	5.268	0.022	0.02
Sad	Residual	277	4804.053	17.343			
	Total	278	4895.419				
	Regression	1	11.918	11.918	3.034	0.083	0.01
Disgust	Residual	277	1087.939	3.928			
	Total	278	1099.857				
	Regression	1	592.459	592.459	77.541	0.000	0.22
Surprise	Residual	277	2116.451	7.641			
	Total	278	2708.910				
	Regression	1	3260.033	3260.033	781.359	0.000	0.74
Neutral	Residual	277	1155.716	4.172			
	Total	278	4415.749				

A simple linear regression was calculated to predict lecture student interaction (LSI) based on class emotions The table 14 shows that R=.490 and $R^2 = 0.240$, this means that happiness emotions explain 24% in variance of lecture student interaction. From table 15 the LSI predict happiness emotion ($F(1, 277) = 87.303$, $p < .000$), with an R^2 of 0.240. Which shows that the lecture student interaction accounted for 24% of the variation in happiness emotions. since ($F(1, 277) = 87.303$, $p < .000$) was significant, it means that good lecture student interaction contributed significantly in the happiness emotions. It was concluded that LSI make a significant contribution and can be used as predictor of happiness emotions. From table 15 the LSI predict anger emotion ($F(1, 277) = 0.002$, $p > 0.965$), with an R^2 of 0.000 was not significant, it means that lecture student interaction does not contributed significantly in the anger emotions. It was concluded that LSI does not make a significant contribution and cannot be used as predictor of anger emotions.

From table 15 the LSI predict fear emotion ($F(1, 277) = 4.038$, $p < 0.045$), with an R^2 of 0.014 Which shows that the lecture student interaction accounted for 1% of the variation in fear emotions. It was significant, it means that lecture student interaction contributed significantly in the fear emotions. It was concluded that LSI make a significant contribution and can be used as predictor of fear emotions.From table 15 the LSI predict sad motion ($F(1, 277) = 5.268$, $p < 0.022$), with an R^2 of 0.019 Which shows that the lecture student interaction accounted for 2% of the variation in sad emotion. It was significant, it means that lecture student interaction contributed significantly in the sad emotion. It was concluded that LSI make a significant contribution and can be used as predictor of sad emotions.From table 15 the LSI predict disgust emotion ($F(1, 277) = 3.034$, $p < 0.083$), with an R^2 of 0.011 Which shows that the lecture student interaction accounted for 1% of the variation in disgust emotion. It was significant, it means that lecture student interaction contributed significantly in the disgust emotion. It was concluded that LSI make a significant contribution and can be used as predictor of disgust emotion.

From table 15 the LSI predict surprise emotion ($F(1, 277) = 77.541$, $p < 0.000$), with an R^2 of 0.219 Which shows that the lecture student interaction accounted for 21% of the variation in surprise emotion. It was significant, it means that lecture student interaction contributed significantly in the surprise emotion. It was concluded that LSI make a significant contribution and can be used as predictor of surprise emotion.From table 15 the LSI predict neutral emotion ($F(1, 277) = 781.359$, $p < 0.000$), with an R^2 of 0.738 Which shows that the lecture student interaction accounted for 74% of the variation in neutral emotion. It was significant, it means

that lecture student interaction contributed highly significantly in the neutral emotion. It was concluded that LSI make a significant contribution and can be used as predictor of neutral emotion.

Table 16 : coefficients of regression

study Variables		**Coefficients**	**Standard Error**	**t Stat**	**P-value**	**Lower 95%**	**Upper 95%**
Happiness	Intercept	6.932	0.690	10.040	0.000	5.573	8.291
	LSI	0.488	0.052	9.344	0.000	0.386	0.591
Anger	Intercept	9.515	0.653	14.561	0.000	8.229	10.801
	LSI	-0.002	0.049	-0.043	0.965	-0.100	0.095
Fear	Intercept	11.208	0.766	14.638	0.000	9.701	12.716
	LSI	0.116	0.058	2.010	0.045	0.002	0.231
Sadness	Intercept	20.837	1.087	19.167	0.000	18.697	22.977
	LSI	-0.189	0.082	-2.295	0.022	-0.351	-0.027
Disgust	Intercept	7.110	0.517	13.744	0.000	6.092	8.129
	LSI	-0.068	0.039	-1.742	0.083	-0.145	0.009
Surprise	Intercept	7.056	0.722	9.778	0.000	5.635	8.476
	LSI	0.481	0.055	8.806	0.000	0.374	0.589
Neutral	Intercept	1.768	0.533	3.316	0.001	0.719	2.818
	LSI	1.128	0.040	27.953	0.000	1.049	1.208

From table16 Lecture student interaction (LSI) predicted (6.932+0.488 happiness), (9.515-0.002 anger), (11.208+0.116fear), (20.837-0.189sadness), (7.110-0.068 disgust), (7.056+0.481 surprise), (1.768+1.128 neutral).

VII. Results and Analysis of hypothesis fourth.

- The perceived learning can predict quality of lecturer-student interaction and class emotion in gender.

Table 17: correlation among POL, LSI and class emotions(n=279)

	LSI	Happiness	Anger	Fear	Sad	Disgust	Surprise	Neutral	POL
LSI									
Happiness	0.490								
Anger	-0.003	-0.243							
Fear	0.120	0.111	0.398						
Sad	-0.137	-0.256	0.557	0.440					
Disgust	-0.104	-0.212	0.487	0.355	0.567				
Surprise	0.468	0.548	-0.059	0.151	-0.056	-0.153			
Neutral	0.859	0.654	-0.126	0.040	-0.226	-0.196	0.589		
POL	0.541	0.652	-0.147	0.034	-0.167	-0.221	0.814	0.805	

Table 17 shows that there are positive correlation among LSI, happiness, fear, surprise and neutral and negative correlation among anger, sad and disgust emotion.

Table 18: model summary(n=279)

Study variable	**Multiple R**	**R Square**	**Adjusted R Square**	**Standard Error**
Perception of learning	0.944	0.891	0.887	1.167

Table 19: ANOVA regression analysis of LSI,POL and class emotions

	df	SS	MS	F	Significance F
Regression	8	2984.220	373.027	275.053	0.000
Residual	270	366.174	1.356		
Total	278	3350.394			

From table 19 A multiple linear regression was calculated to predict perception of learning (POL) based on their lecture student interaction (LSI) and class emotions. A significant regression equation was found (F (8, 270) = 275.053, $p < .000$), with an R^2 of 0.891, table 18 shows that both lecture student interaction (LSI) and class emotions accounted for 89.1% of the variation in perception of learning(POL). It was significant; it means that lecture student interaction and class emotions contributed highly significantly in the perception of learning (POL). It was concluded that LSI and class emotions make a significant contribution and can be used as predictor of perception of learning (POL).

Table 20: coefficients of regression

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.362	0.561	-0.646	0.519	-1.466	0.742
LSI	-0.558	0.047	-11.849	0.000	-0.651	-0.465
Happiness	0.035	0.034	1.030	0.304	-0.032	0.101
Anger	0.015	0.036	0.415	0.678	-0.056	0.086
Fear	-0.036	0.029	-1.261	0.209	-0.093	0.020
Sad	0.025	0.023	1.060	0.290	-0.021	0.070
Disgust	-0.039	0.045	-0.871	0.384	-0.127	0.049
Surprise	0.540	0.029	18.353	0.000	0.482	0.598
Neutral	0.804	0.043	18.851	0.000	0.720	0.887

Table 20 shows that LSI and some class emotions (surprise and neutral) can predict significantly the perception of learning(POL=-0.362-0.558 LSI + 0.540 surprise+0.804 neutral).

VIII. Discussion

There was a need to study the relationship between perception of learning and class emotions as there was a scarcity in the literature studies involving class emotions and perceived learning. This paper has approached the concept of seven class emotions (happiness, anger, fear, sad, disgust, surprise, and neutral) as predictors of technical college students' achievement. It was found that given the scoring of the nominal variable of gender, ANOVA analysis for gender shows that both males and females reported higher levels of sadness. And this result does not agrees with many studies that showed females are higher than males in the emotional intelligence (Day & Carroll, 2004; Grewal & Salovey, 2005; Joseph & Newman, 2010). However the current result matched with the results of Pekrun et al. (2007), which showed that the relationship between males' emotions toward mathematics, and females' emotions toward mathematics were structurally equivalent. Nonetheless, females reported lower enjoyment in and higher anxiety and shame towards mathematics, while Bowd and Brady (2003) reported that both women and men enjoying studying mathematics.

It is also revealed that there are no differences between males and females in perception of learning. This can be explained in the light of the fact that the students have the same academic content. In addition, both genders are taught by qualified teachers. The current findings also found that there are no differences between males and females in class emotions except in anger in favour of females, sadness in both males and females, disgust in favour of males and neutral in favour of males and to explain this result we can say those students have generally similar emotions and this might be because of the students' teachers who follow similar teaching techniques and also the students have similar cultural backgrounds.

However, both males and females have more sadness and the cause of that is varied. It might be because the lecturers encourage students to memorize the learning technical concepts; the focus is on lab demonstrations rather than hands on, problem-solving learning (Mallow, 2006). So, the students do not express more sadness in perception of learning.

It is also revealed that there are no differences between males and females in lecturer-student interaction. This can be explained in the light of the fact that the lecturer interact the student with same kind of teaching techniques. The current findings also found that there are no differences between males and females in class emotions except in anger in favour of females, sadness in both males and females, disgust in favour of males and neutral in favour of males and to explain this result we can say those lecturers have generally applying conventional technique of teaching and this is the moment where they have rectify and bring the innovation techniques of teaching which might help those students who did not get the sense of lecture when the lecture were teaching conventional method. It also showed that Lecturer-student interaction and class emotions make a significant contribution and can be used as predictor of perception of learning.

IX. Conclusion And Future Work

It was concluded that positive and negative class emotions play an important part as predictors of the students' perception of learning as it explains 83% of the variance in perception of learning. This means that the academic emotions improve and affects the students' perception of learning. It concluded that there are differences between males and females in class emotions except in the sadness are equivalent both in favour of males and females. It was also concluded that the lecturer- student interaction explains 74% of the variation in neutral emotion in students. The current study was also concluded that both lecturer- student interaction (LSI) and class emotions explains 89% of the variation in perception of learning(POL).Emotions are fundamental to learning (Hinton, Miyamoto, & Della-Chiesa, 2008). It is known in every educational system that academic achievement is the most important outcome and researches done in the field of academic emotions have indicated its significant contribution to the academic achievement. Therefore considering students' emotions should be an aim of education. The current results have implications for the lecturers that they should take into account students' academic emotions towards learning technical subjects, without doing this; they cannot help them to reduce their negative emotions and call upon their positive ones. They need also to understand the students' class emotions towards learning and support them when needed and try to reduce the negative emotions such as anger, disgust, and sadness. Teachers should freely talk about feelings with the students. Education based on emotions can provide peace and less sadness, anger, disgust, and more happiness.

For the future research, the present study should be repeated by administering class emotions for university stages, especially in the Jammu province as not much research of the academic emotions has been done. In addition, academic emotions can be researched in different subjects.

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Appendix A

Questionnaire

(Related to Student's Emotions: Before, During and After a class)

Dear students,

The researcher is undertaking a survey of the role of emotional intelligence in predicting academic outcomes such as achievement, learning of students in the state of J & K. This study highlights the significance of emotional intelligence in enhancing learning outcomes among students. As a part of this study, certain data are required to be collected for analyzing the feelings or emotions of the students that have experienced in lecture. You are requested to think of few lecturers who have taught you and with whom you perceive you have a **GOOD/POOR interaction**. Answer the following questions keeping in mind the same lecturer whom you thought. The statements below describe feelings that you may have experienced before, during and after the class, taught by this lecturers.

Please feel free to provide the required information as per your feelings and emotions and I assure you that the information so provided would be kept strictly confidential.

Note: Please put tick mark (✓) at the response of your closest choice.

1. Name (optional):_____
2. Name of the college/university: _____
3. Course: _____
4. Branch: _____
5. Gender: _____
6. Age: _____
7. Address:_____

BEFORE CLASS

The following questions pertain to feelings you may experience BEFORE being in class. Please indicate how you feel, typically, before you go to class.

1. I get excited about going to attend his/her lecture.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

2. The thought of attending lecture made me lethargic.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1 2 3 4 5

3. I am confident when I go to attend his/her lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

4. I am looking forward to learning a lot in his/her lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

5. I felt motivated to attend his/her lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

6. Even before the lecture, I worry whether I will be able to understand the material.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

7. I felt discouraged at the thought of having to attend his/her lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

8. Because I am so nervous I would rather skip his/her lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

9. I have given up, I don't have energy to attend his/her lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

10. I wish I did not have to attend his/her lecture because it makes me angry.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

DURING CLASS

The following questions pertain to feelings you may experience DURING class. Please indicate how you feel, typically, during class.

11. I enjoyed listening to his/her lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

12. I was tempted to walk out of the lecture because it was boring.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

13. Thinking about all the useless things I have to learn makes me irritated.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

14. I was focused during the lecture that I did not realise time passing.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

15. I felt bored during lecture and therefore I had problems staying alert.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

16. I was physically present in the lecture but mentally I was absent.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

17. The lecturer cared about me as a person and not just as a student during the lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

18. The lecturer initiated interaction and discussions that helped me learn the subject.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

19. The lecturer was open to student discussions and opinions voiced by students.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

20. The lecturer's teaching style was described as rigid (i.e. strict) and controlling in the lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

21. I am surprise that I have solved difficult problem in the lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

22. Thinking about the poor quality of the course/lecture makes me angry.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

23. I enjoy participating in the class so much that I get energized.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

24. I get scared that I might say something wrong, so I did rather not say anything in the lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

AFTER CLASS

The following questions pertain to feelings you may experience AFTER having been in class. Please indicate how you feel, typically, after class.

25. I looked forward to the next lecture (of the same module) when the lecture was over. Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

26. I felt glad that I had attended the lecture.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

27. The lecturer was able to stimulate my interest in the module.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

28. The lecturer explained the subject material such that it had practical value for me.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

29. The lecturer encouraged me to apply the skills that I have learnt in the course to other modules that I was taking.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

30. The lecturer encouraged me to relate what I was learning in the module to what I already know.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

31. I am surprise that I can be proud of what I know about this subject.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

32. I am ashamed because others understood more of the lecture than I did.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

33. When I think of the time I waste in the lecture, I get angry.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

34. When I cannot keep up with my studies it makes me fearful.
Strongly Disagree Disagree Neutral Agree Strongly Agree
1 2 3 4 5

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