

# A Study on the Combined Correlation between Academic Delay of Gratification and Academic Volition, With Emotional Intelligence in Student Teachers

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**Abstract:** The present study is an attempt to examine the relationship between academic delay of gratification and academic volition in combination, with emotional intelligence in student teachers. Sample for the study includes 38 urban student teachers of B.Ed. and M.Ed. classes of an education college in Banjara Hills, Hyderabad, Telangana, India. The data for measuring Emotional intelligence is collected by using the *Trait Emotional Intelligence Questionnaire – Adolescent Short Form (TEIQue-ASF)*, prepared by Petrides, K. V. & Furnham, A. (2006) for adolescents. The data for measuring delay of gratification is collected using *Academic Delay of Gratification Scale (ADOGS)* for college students prepared by Hefer Bembenutty (1997). Academic volition of the student teachers is measured by collecting data using the *Academic Volitional Strategy Inventory (AVSI)* for college students prepared by MacCann and Garcia (2000). For data analysis, Pearson's Product-Moment Correlation coefficient and Multiple Regression are used. The significance of the test is calculated using critical value table for Pearson's Product-Moment Correlation and F-test for the level of significance  $\alpha$  at 0.05, using SPSS ver.20. The findings of the study reveal that the linear combination of variables academic delay of gratification and academic volition positively and moderately predict the variable emotional intelligence in students teachers.

**Keywords:** Academic Delay of Gratification, Academic Volition, Amygdala, Prefrontal Cortex, Emotional Intelligence, Student Teachers, Student Teacher Educators, Ventral Striatum.

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## I. INTRODUCTION

From the background of neuroscience, the section of the brain associated with rewards is the ventral striatum (Hariri et.al 2006). The amygdala is the emotion processing center, especially associated with the origin of negative emotions. The prefrontal cortex is the section of the brain that is associated with the executive functions like decision making, problem solving and motivation and willpower (Le Doux, 1996 & Goleman.D., 1995).

The amygdala is connected to both, prefrontal cortex and ventral striatum (Banks,S.J. and colleagues, 2007 & Cador,.M, Robbins,.T.W.& Everitt,.B.J.,1989). The ventral striatum is in turn connected to prefrontal cortex (Casey,B.J. and colleagues, 2011).

When learners set temporally distinct but highly rewarding goals, they display academic delay of gratification (Bembenutty, 1999). It calls for regulation of emotions against temptations in the initial stages of the learning process.

Another vital aspect of self regulated learning is to keep the level of motivation high and exhibit the ability to fight against emotions during the long tenure of learning process, by regulating the motivation. It is called the use of academic

volitional strategy (McCann, E., & Turner, J. E., 2004). Delay of gratification, as part of the self-regulatory system, has been proved to be strongly related to students' use of volitional strategies (Bembenutty, H., 2004).

In both the mentioned scenarios, it is vital for the learner to possess the ability to self regulate emotions, particularly the negative ones and stay motivated. This is emotional intelligence (Goleman, 1995).

It is here by proposed that a self regulated learner displays academic delay of gratification in the initial stages of joining a course of long duration by self regulating negative emotions. All along the duration of the course or through the learning process, the learner displays regulation of motivation levels especially during the difficult times for attainment of the temporally distinct goals, which is academic volition.

This is made possible through the existence of emotional intelligence in the personality of the learner and hence strategies like academic delay of gratification and academic volition can predict emotional intelligence in self-regulated learners. The mentioned neural interconnectivities among amygdala, ventral striatum and prefrontal cortex also indicate such a possibility.

In this context, the student teachers pursuing the new two years duration B.Ed. and M.Ed. courses (as per Justice Verma Committee recommendations, 2013), ideally represent the subjects of the study, who must possess emotional intelligence in order to display academic delay of gratification and academic volition in the beginning and all along the duration of the course, respectively.

**Emotional Intelligence:** Goleman defined emotional intelligence as “the capacity for recognising our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships” (Goleman 1998: 317).

**Academic Delay of Gratification:** Hefer Bembenutty defined academic delay of gratification as “students' willingness to forgo an immediately available option, in favor of a delayed alternative, in order to secure temporarily distant academic rewards, goals, and intentions” (Bembenutty, 1999).

**Volition:** It is defined as the “tendency to maintain focus and effort toward goals despite potential distractions” (Corno, 1993; Kuhl, 1985; Snow, Corno, & Jackson, 1996).

## II. BODY OF ARTICLE

### STATEMENT OF THE PROBLEM:

A Study on the Combined Correlation Between Academic Delay of Gratification and Academic Volition, with Emotional Intelligence in Student Teachers.

### RESEARCH OBJECTIVES:

- To study the relationship between emotional intelligence and academic delay of gratification in student teachers.
- To study the relationship between academic delay of gratification and academic volitional strategy in student teachers.
- To study the relationship between emotional intelligence and academic volitional strategy in student teachers.
- To study the relationship between academic delay of gratification and academic volitional strategy of student teachers with their emotional intelligence.

### RESEARCH HYPOTHESES:

- **H<sub>0</sub>:** There is no significant relationship between emotional intelligence and academic delay of gratification in student teachers.
- **H<sub>0</sub>:** There is no significant relationship between academic delay of gratification and academic volition strategy in student teachers.
- **H<sub>0</sub>:** There is no significant relationship between emotional intelligence and academic volition strategy in student teachers.

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- **H<sub>0</sub>:** There is no significant relationship between the linear combination of the academic delay of gratification and the academic volitional strategy of student teachers with their emotional intelligence.

**POPULATION FOR THE STUDY:**

The population for this study is the student teachers and student teacher educators in government or private colleges of education in the G.H.M.C limits of Hyderabad city.

**SAMPLE FOR THE STUDY:**

Here 38 student teachers and student teacher educators from B.Ed. and M.Ed. courses of the Ghulam Ahmed College of Education, selected randomly were taken as the sample of the study.

**TOOLS USED IN THE STUDY:****A. *Measuring Emotional Intelligence:***

The researcher in the present study used Trait Emotional Intelligence Questionnaire – Adolescent Short Form (TEIQue-ASF), which is a simplified version of The Trait Emotional Intelligence Questionnaire - Short Form (TEIQue-SF, Petrides and Furnham, 2004), for the measurement of the emotional intelligence in respect of four factors of emotional intelligence namely, Well Being, Self-Control, Emotionality and Sociability respectively, in adults.

The ASF comprises 30 short statements, two for each of the 15 trait EI facets, designed to measure global trait EI. The internal consistency of the global score usually exceeds .80. The form has been used successfully with children as young as 11 years old.

**B. *Measuring Academic Delay of Gratification:***

Academic Delay of Gratification tendencies would be measured using the 10 item Academic Delay of Gratification Scale (ADOGS, Bembenuity, H., 1997).

The internal consistency ADOGS, when Caucasian Americans were taken as sample, is  $\alpha = 0.70$  (Bembenuity & Karabenick, 1998). The 10 items reflect a variety of students' academic experiences, such as meeting deadlines on assignments, use of the library, interpersonal relations with peers and instructors, and studying course materials.

The responses are obtained in a four point Likert scale ranging from "Definitely choose A," "Probably choose A," "Probably choose B," and "Definitely choose B."

**C. *Measuring Academic Volition Strategy:***

The Academic Volitional Strategy Inventory (AVSI; McCann, 1999) is a self-report instrument designed to assess the management of emotion and motivation by college students during the goal-striving process.

There are 30 items. The dimensions covered by the tool are self talk, negative consequences, concentration strategies, socializing strategies, self reinforcement, self encouragement, taking breaks and relaxing music.

The internal consistency of the tool measured using Cronbach's alpha is 0.87 and test-retest reliability for four weeks gap is 0.72. The responses are obtained in a seven point Likert scale ranging from (1 = "Not at all of me" and 7 = "Very true of me"). The tool has content validity and construct validity.

**SAMPLING:**

Simple random sampling technique was used by the investigator while selecting a sample of 38 student teachers from an education college in Banjara Hills area.

**DATA COLLECTION:**

Formal permission to administer the tests for data collection for three consecutive days, was provided by the Principal of Ghulam Ahmed College of Education.

As the research design of the study is Explanatory Correlational Analysis design, the researchers here collected three scores from each participant as each score represents each variable being studied (Creswell, 2008).

The Trait Emotional Intelligence Questionnaire- Adolescent Short Form (TEIQUE-ASF, Petrides, K.V., Sangareau, Y., Furnham, A., & Frederickson, N. (2006), was administered on adolescent student teachers of Ghulam Ahmed College of Education, for the measurement of their emotional intelligence on day one of data collection.

Their academic delay of gratification was measured using the 10 items Academic Delay of Gratification Scale (ADOGS, Bembenny, H., 1997) on the second day of data collection.

The Academic Volitional Strategy Inventory (AVSI; McCann, 1999) was administered on the sample on the third day of the data collection to measure their academic volitional strategies.

**Results:**

**TABLE: I CORRELATION STRENGTH**

Correlation Between Academic Delay of Gratification (X <sub>1</sub> ) and Emotional Intelligence (Y)		
Mean Academic Delay of Gratification	Mean Emotional Intelligence	Pearson's Product Moment Correlation Coefficient
3.314	4.625	0.413

**Interpretation:** Since the correlation coefficient between emotional intelligence and academic delay of gratification obtained is 0.413, it means a positive and moderate relationship exists between the two variables. Both the values are more than the mean score and hence considered high.

**TABLE: II CORRELATION STRENGTH**

Correlation Between Academic Volition (X <sub>2</sub> ) and Emotional Intelligence (Y)		
Mean Academic Volition	Mean Emotional Intelligence	Pearson's Product Moment Correlation Coefficient
3.479	4.625	0.357

**Interpretation:** Since the correlation coefficient between academic volition and emotional intelligence obtained is 0.357, it means a positive and moderate relationship exists between the two variables. Both the values are more than the mean score and hence considered high.

**TABLE: III CORRELATION STRENGTH**

Correlation Between Academic Delay of Gratification (X <sub>1</sub> ) and Academic Volition (X <sub>2</sub> )		
Mean Academic Delay of Gratification	Mean Academic Volition	Pearson's Product Moment Correlation Coefficient
3.134	3.479	0.327

**Interpretation:** Since the correlation coefficient between academic delay of gratification and academic volition obtained is 0.327, it means a positive and moderate relationship exists between the two variables. Both the values are more than the mean score and hence considered high.

**TABLE: IV TESTING MULTIPLE REGRESSION CORRELATION STRENGTH**

Correlation Between the Linear Combination of Academic Delay of Gratification and Academic Volitional Strategy, and Emotional Intelligence			
Mean Academic Delay of Gratification	Mean Academic Volition	Mean Emotional Intelligence	Multiple Regression Coefficient R
3.134	3.479	4.625	0.475

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**Interpretation:** Since the multiple regression coefficient between the linear combination of emotional intelligence with academic delay of gratification and academic volition obtained is 0.475, it means a positive relationship exists between these three variables, and academic delay of gratification and academic volition moderately predict emotional intelligence in student teachers.

TABLE: V TESTING HYPOTHESIS ONE

Significance Test for the Correlation Between Emotional Intelligence and Academic Delay of Gratification:		
Emotional Intelligence		
Academic Delay of Gratification	n	38
	df (n-2)	36
	Pearson's Correlation Strength ( $\gamma$ absolute)	0.413*
	$\gamma$ critical from the Critical Value Table of Pearson's Correlation	0.312
	Sig.(Two-tailed)	H <sub>0</sub> : Rejected

\* Correlation is significant at the 0.05 level (2-tailed)

**Interpretation:** The outcome of the data analysis shows that the calculated value or absolute value of r between academic delay of gratification and emotional intelligence is 0.413. The critical value is 0.312 for level of significance 0.05 from the r table. It can be interpreted that academic delay of gratification is moderately and positively correlated to emotional intelligence because for the level of significance 0.05, degree of freedom 36, the calculated value of r is greater than the critical value.

TABLE: VI TESTING HYPOTHESIS TWO

Significance Test for the Correlation Between Emotional Intelligence and Academic Volition:		
Emotional Intelligence		
Academic Volition	n	38
	df (n-2)	36
	Pearson's Correlation Strength ( $\gamma$ absolute)	0.357*
	$\gamma$ critical from the Critical Value Table of Pearson's Correlation	0.312
	Sig.(Two-tailed)	H <sub>0</sub> : Rejected

\* Correlation is significant at the 0.05 level (2-tailed)

**Interpretation:** The outcome of the data analysis shows that the calculated value or absolute value of r between academic volition and emotional intelligence is 0.357. The critical value is 0.312 for level of significance 0.05 from the r table. It can be interpreted that academic volition is moderately and positively correlated to emotional intelligence because for the level of significance 0.05, degree of freedom 36 the calculated value of r is greater than the critical value.

TABLE: VII TESTING HYPOTHESIS THREE

Significance Test for the Correlation Between Academic Delay of Gratification and Academic Volition:		
Academic Volition		
Academic Delay of Gratification	n	38
	df (n-2)	36
	Pearson's Correlation Strength ( $\gamma$ absolute)	0.327*
	$\gamma$ critical from the Critical Value Table of Pearson's Correlation	0.312
	Sig.(Two-tailed)	H <sub>0</sub> : Rejected

\* Correlation is significant at the 0.05 level (2-tailed)

**Interpretation:** The outcome of the data analysis shows that the calculated value or absolute value of r between academic delay of gratification and academic volition is 0.327. The critical value is 0.312 for level of significance 0.05 from the r table. It can be interpreted that academic delay of gratification is moderately and positively correlated to academic volition because for the level of significance 0.05, degree of freedom 36, the calculated value of r is greater than the critical value.

**TABLE: VIII TESTING HYPOTHESIS FOUR**

		Significance Test for the Multiple Regression Correlation Between the Linear Combination of Academic Delay of Gratification and Academic Volitional Strategy with Emotional Intelligence: F-Test	
<i>The Linear Combination of Academic Delay of Gratification and Academic Volitional Strategy</i>	<b>Emotional Intelligence</b>		
	<b>n</b>		<b>38</b>
	<b>df = (k,n-k-1)</b>		<b>(2,35)</b>
	<b><math>F_{ab} = (R^2/k) / ((1-R^2) / (n-k-1))</math></b>		<b>5.06*</b>
	<b>F critical from the F - Table</b>		<b>3.23</b>
	<b>Sig.(Two-tailed)</b>		<b>H<sub>0</sub>: Rejected</b>

\* Correlation is significant at the 0.05 level (2-tailed)

**Interpretation:** The outcome of the data analysis shows that the calculated value or absolute value of F-test between the linear combination of academic delay of gratification and academic volition with emotional intelligence is 5.06. The critical value is 3.23 for level of significance 0.05 from the F-table. It can be interpreted that both the variables academic delay of gratification and academic volition moderately and positively predict emotional intelligence, because for the level of significance 0.05, degree of freedom (2,35), the calculated value of F-test is greater than the critical value.

### III. CONCLUSION

The extension of duration of the B.Ed. and M.Ed. courses to two years, in order to raise the standard of these courses, as per the recommendations of the Justice Verma Committee 2013, is a welcome change in teacher education.

Students who are highly motivated and serious about the teaching profession can be expected to enroll for the teacher education courses now.

But, compared to their predecessors, they have to wait for longer duration of time and keep their spirits high, to enjoy the fruits of their academic labor. This calls for the display of academic delay of gratification and academic volition in the initial days and through the entire duration of the teacher education courses, by the prospective student teachers.

The present study has established that those who possess the ability to self regulate their emotions are in a better position to remain motivated and successfully complete the two years duration teacher education courses, compared to the rest.

Irrespective of the teacher education course pursued by a student, he or she would require the essential trait of emotional intelligence to sail through the course without any obstacle.

The positive, moderately strong and significant relationship predicting emotional intelligence in student teachers with academic delay of gratification and academic volition through this research study, establishes the need for the instruction of emotional intelligence in teacher education courses through inclusion of Social Emotional Learning (SEL) programs in the curriculum.

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Due to the practical limitations like time and cost, the study was limited to Hyderabad city limits. The study can be replicated with larger sample size in multiple contexts and others parts of the country and world. Most of the sample subjects were females. Further studies can search for the role of gender of the student teachers in these three variables.

Further studies can also be taken up to compare the student teachers with respect to the dimensions of these three essential variables.

Moreover, academic volition, academic delay of gratification and emotional intelligence are very closely related to academic achievement. A study on whether these three variables predict academic achievement in student teachers can be taken up using multiple regression. Such a research endeavor would further strengthen the reason for the inclusion of these vital academic constructs in teacher education curriculum for their promotion.

Emotional intelligence can be promoted through Social Emotional Learning (SEL) programs and academic delay of gratification and academic volition can be promoted through Self Regulated Learning (SRL) methods.

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