

## **Enhancing Self-Efficacy: Pathway to Improve Academic Achievement Motivation**

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### **Abstract**

The present research aimed to study the effect of self-efficacy and gender pattern on intrinsic, extrinsic and amotivation-motivational orientations of academic achievement motivation among adolescents. A sample of 102 students (51males and 51 females), in the age-range of 14-17 years, was selected randomly from various educational institutions of tri-city (Chandigarh, Mohali and Panchkula). The measures used were Self-Efficacy Questionnaire for Children (Muris, 2001) and Achievement Motivation Scale-School Version (Vallerand et. al., 1992). A 2X2 factorial design was used to analyze the data. The analysis indicated that highly efficacious students were intrinsically motivated than did their counterparts. However, students who have no faith in their capabilities were extrinsically motivated and amotivated. Furthermore, gender differentiation and interaction effect did not make any contribution to the motivational orientations of achievement motivation. It seems logical to understand that poor belief in one's ability is a driving component of feeling disinterested towards academic activities. It is noteworthy that amotivation which reflects strong feeling of incompetence and expectancies of uncontrollability is highly detrimental for school achievement. These findings can serve to provide practical guidelines for designing of interventions to enhance self-efficacy and achievement motivation.

**Key words:** Adolescent, Self-Efficacy, Academic Motivation

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Adolescence is a stressful period during development because it involves a pivotal transition from childhood dependency to adulthood independence and identity formation. In addition to physiological maturation, this phase is saliently marked by changes in young people's emotional, intellectual, cognitive and social environments (Vera, Shin, Montgomery, & Speight, 2004) and the individual is expected to confront and adapt to the rigorous modifications in school environment, family relations and peer-group affiliations.

Parents consistently play an important role in adolescents' life. There is a temporary increase in family conflicts, particularly over issues related to autonomy and control. The pressure from parents to do well in board exams and to get into prestigious institutes for higher studies is rooted in a sense of helplessness or extreme frustration. They often don't express an inability to cope with the pressure, suicide becomes a way out. The popular and primary reasons for student suicides are; failing exams (TOI March, 08 & NCR Bureau, 2013), to be successful in professional entrance exams and being anxious about letting their family down. These result in an impulsive decision or a long thought-out deliberate suicide (Lifestyle; Hindustan Times, March, 2017). Because students attribute their academic difficulties to their low perceived competence (Wigfield, 1988) which has been identified as a precipitating factor in lack of motivation toward academic activities, one of the most prominent academic problems plaguing today's teenage youth. Year after year, for reasons yet to be understood, numerous high school students find themselves in a state in which they do not have the desire to carry out the academic tasks required of them (Green-Demers & Pelletier, 2003). Undoubtedly, the absence of academic motivation can lead to feelings of frustration and discontentment which can hamper productivity and well-being. Although academic motivation has received much conceptual and empirical focus, the fact remains that majority of high school students lack academic motivation (Snyder & Hoffman, 2002).

Motivation is considered one of the most important foundation essential for students' academic development (Steinmayr & Spinath, 2009). To be motivated means 'to be moved' to do something. A person who feels no impetus or inspiration to act, is thus characterized as

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unmotivated, whereas someone who is energized or activated towards an end is considered motivated. Academic achievement motivation refers to a pupil's need or drive towards the achievement in academic setting rather than motivation in general.

In present study, academic achievement motivation was viewed within the context of the self-determination theory of Deci and Ryan (1985). Here the motivation is operationalized as the underlying 'why' of the behavior and focus on the perceived reasons for engaging in an activity. Thus, the achievement motivation scale used in the present study asks the question, "Why do you go to school?" and the items represents the possible answers to that question, thus reflecting the different types of motivation. Self-determination theorists posit that academic motivation is multidimensional in nature and is composed of three global types of motivation: intrinsic motivation, extrinsic motivation and amotivation. Intrinsic motivation refers to the pleasure and satisfaction students derived from learning, exploring, understanding and attempting to accomplish something by engaging in an activity (Vallerand et al., 1992). Extrinsic motivation refers to the behaviours which are regulated by external means such as rewards and constraints, and not for their own sake. Amotivation can best be described as having no motivation. It is a feeling of helplessness and incompetence. Ahmed and Bruinsma (2006) stated that amotivation occurs when an individual does not perceive contingencies between their action and its outcome. This type of motivation is the opposite of self-determined behaviour. Past studies have identified lack of motivation which, not only leads to disengagement with school in general, but to underachievement and dropping out of school (Azzam, 2007; Glass & Rose, 2008; Janosz et. al., 2008). Corpus and colleagues (2009) observed a steady decline of intrinsic motivation in elementary students and adolescents within one academic year. During childhood and adolescence intrinsic motivation starts to decline from the age of nine and continues up to the age of 16 (Gottfried et al., 2001). Therefore, it is essential for an individual to have confidence in their ability to control their environment which determines the level of motivation to overcome these challenges. When self-efficacy is dubious, failure is perceived as a likely outcome.

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Self-efficacy represents the core aspect of Bandura's Social Cognitive Theory. Bandura (1986) defines "self-efficacy as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives". It is not concerned with the skill one has but with the judgement of what one can do with whatever skills one possesses. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities. They heighten and sustain their efforts in the face of adversities. They quickly recover their sense of efficacy after setbacks. They attribute failure to insufficient effort or deficient knowledge and skills which are acquirable. Such an efficacious outlook has a profound impact on the study of motivation and achievement in academic settings (Campbell, 2007). In contrast, people who doubt their capabilities, slacken their efforts and give up quickly in the face of difficulties. They have low aspirations, weak commitments to the goals, deficient aptitude, always concentrate on adverse outcomes and slow to recover their sense of efficacy following negative academic outcomes. They fall easy victim to stress, depression and lack of motivation.

People's beliefs about their efficacy can be developed by four sources of influence which vary in strength and importance: mastery experiences, social persuasion, vicarious experience, and physiological states (Bandura, 1997). Mastery experiences, the most prominent source, develop over time as students experience successes and failures. Social persuasion is developed as students interact with the individuals around them. For instance, verbally encouraging parents and teachers can raise a student's self-efficacy. Vicarious experiences occur as students view the successes and failures of others. A student's sense of self-efficacy is more positively impacted by others who experience success, if common characteristics are shared such as age, gender, and perceived similar abilities. Lastly, as students are judging capabilities, emotional states are also relied upon. For example, Hibbs (2012) attests that anxiety and stress lowers self-efficacy while excitement and positive mood increases self-efficacy.

Self-efficacy beliefs play a key role in the self-regulation of motivation (Pajares, 1996). They form beliefs about what they can do. They anticipate likely outcomes of prospective actions. They set goals for themselves and plan courses of action designed to realize valued futures. Self-efficacy beliefs influence causal attributions. Highly efficacious individuals attribute their failures to insufficient efforts. In contrast, inefficacious attribute their failures to low ability. In expectancy-value theory, motivation is regulated by the expectation that a given course of behaviour will produce certain outcomes and the values of those outcomes and in terms of self-efficacy beliefs, about what they can do and the likely outcomes of performance (Multon, Brown & Lent, 1991).

Gender has always been one of the most significant determinants of various cognitive motivational and affective processes. There is a vast amount of literature in India and abroad, indicating differences in self-efficacy and academic achievement motivation attributable to gender differences. But substantial contradictory evidence also exists, supporting the view that there is no significant difference between the levels of self-efficacy and dimensions of academic achievement motivation. The similarity of the performance on self-beliefs and academic achievement motivation was also explained by the changing social roles, lifestyles, socio-economic status, family typology, values and exposure to media and technology. It seems logical to understand that poor belief in one's ability is a driving component of academic amotivation. Thus, there has been an increasing concern in the education sector on how to motivate students to learn optimally at school and achieve excellence in their academic pursuits.

Majority of the past and recent research has focused on measuring the academic achievement of students belonging to different age groups and education levels (Pajares & Miller, 1994., Long et al.2007., Ibrahim &Ibrahim, 2017) Academic achievement is often treated as a dependent variable and is measured in terms of GPAs, and grades or marks obtained by the students. There are fewer studies, however, that have explored academic achievement motivation as a dependent variable, which is the endeavor of the current study. Academic

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achievement refers to performance, in the form of a numerical score as obtained in an examination or test whereas, academic achievement motivation is students' need who is energized or activated towards the achievement in academic setting rather than motivation in general. In this study, self-efficacy and gendered pattern are treated as independent variables whose effect on academic achievement motivation was quantified. In addition to determining the presence or absence of achievement motivation, the present study also focuses on the types of achievement motivation the students possess. Depending on the source of motivation, it can be intrinsic or extrinsic or amotivation which the present study aims to measure the same quantitatively as well. For example, some students might attend school due to an inherent interest in studies as well as co-curricular activities and experiences that the school offers, while others might engage in learning activities to gain rewards or to avoid punishment. In other extreme cases, students might withdraw themselves from academic involvement completely due to perceptions of incompetence and loss of control over the consequences. An insight into the motivation type or source can help address the issue of low achievement motivation in students in a more effective and meaningful manner. It would help the researchers to design or tailor interventions for each student based on "what" motivates them instead of administering a generic intervention.

The present study also aims to determine gender-related differences in academic achievement motivation for high school students. Different motivational orientations (extrinsic, intrinsic and amotivation) will be evaluated based on gender. Prior research evaluated differences in academic achievement motivation based on gender primarily for undergraduate (Husain, 2014) and postgraduate level students (Akram & Ghazanfar., Sharma & Rani, 2014). The current study fills this gap and focuses on adolescents as they are more susceptible to feelings of self-doubt and can get easily demotivated. Also, since most of the past research has been conducted in western settings (Areepattamannil, 2010., Brouse, 2010 & Cerasoli et al., 2014), there is value in pursuing this study for Indian students owing to the cultural differences.

## **Objectives**

The objectives of the present study were to investigate:

1. the effect of self-efficacy on different motivational orientations namely; intrinsic, extrinsic and amotivation of academic achievement motivation.
2. the gender differences on different motivational orientations namely; intrinsic, extrinsic and amotivation of academic achievement motivation.
3. the interaction effect of self-efficacy and gender on different motivational orientations namely; intrinsic, extrinsic and amotivation of academic achievement motivation.

## **Hypotheses**

1. Individuals with high self-efficacy would score significantly higher on intrinsic motivation as compared to individuals with low self-efficacy.
2. Females would score significantly higher on intrinsic motivation-a motivational orientation of academic achievement motivation as compared to males.
3. Self-efficacy and gender would have significant effect on Intrinsic, extrinsic and amotivation-motivational orientations of academic achievement motivation.
4. Individuals with low self-efficacy would score significantly higher on extrinsic motivation and amotivation-motivational orientations of academic achievement motivation as compared to individuals with high self-efficacy.
5. Males would score significantly higher on extrinsic motivation and amotivation-motivational orientations of academic achievement as compared to females.

## **Method**

### **Design**

A 2×2 factorial design was used to study the effect of two independent variables namely, Self-Efficacy (A) with two levels ; Low self-efficacy ( $a_1$ ) and High self-efficacy ( $a_2$ ) and Gender (B) with two groups; Males ( $b_1$ ) and Females ( $b_2$ ) on dependent variable i.e. motivational orientations of academic achievement motivation namely, intrinsic, extrinsic and amotivation.

## **Sample**

The sample for the present study consisted of 102 subjects (51 males and 51 females). The age range of these subjects varied from 14- 17 years. Data was collected randomly from various educational institutions of tri-city (Chandigarh, Mohali and Panchkula). Prior consent of the respective school principals and participants was sought. All the measures were personally administered to each subject after giving general instructions. It was ensured that the subject marked answers for each question.

## **Measures**

### **1. Self-Efficacy Questionnaire for Children (SEQ-C): Muris, (2001)**

Self-efficacy questionnaire is a self-reporting scale that purports to measure adolescents' beliefs about their competencies in social, academic and emotional domains. The questionnaire is composed of 24 items. The three subscales each contain a 5-point Likert-type scale (1=not at all to 5=very well). Scoring of items on SEQ-C was done according to instructions given in the manual. The total score of SEQ-C yielded internal consistency reliability of 0.88 and subscale scores yielded between 0.85 and 0.88.

### **2. Academic Motivation Scale-High School Version (AMS-HS; Vallerand et al., 1993)**

The AMS-HS is based on tenets of self-determination theory (Deci & Ryan, 1985) which emphasizes quality of motivation and not just the quantity of motivation. The Academic Motivation Scale assesses three motivational orientations, namely intrinsic, extrinsic and amotivation. The Academic Motivation Scale consists of 28 items that students respond to on a 7-point Likert-type scale, ranging from 1 = does not correspond at all to 7 = correspond

exactly. Scoring of items on AMS-HS was done according to instructions given in the manual. The internal consistency for the seven subscales assessed during the development of the English version of AMS, was found to be between 0.83 and 0.86 with the exception of the identified subscale of extrinsic motivation, which had an internal consistency of .62 (Vallerand et al.,1992).

## Procedure

To achieve the aim of the present research, a sample of 102 adolescents was selected randomly from various educational institutions of Chandigarh, Mohali and Panchkula. Upon approval by the principals and regular classroom teachers, the purpose of the research was thoroughly explained to prospective research participants. They were emphatically instructed not to consult anybody and respond individually to all the measures of the study. The measures for the study were administered in a class-room setting. Furthermore, they were given assurance that the information was being collected purely for research purposes and would be kept strictly confidential. The data was collected in three sessions. All questionnaires/scales were collected after completion, and the respondents were thanked for their cooperation and participation. Scoring was done according to the guidelines given in the respective manuals of the measuring tools.

## Results and Discussion

Following is the description and interpretation of the obtained results.

**Table I: F-ratios of Intrinsic Motivation-Motivational Orientation of Academic Achievement Motivation as a Function of Self-efficacy and Gender**

Dependent Variable	Independent Variables	Levels	N	Mean	Standard Deviation	F-ratio
Intrinsic Motivation	Self-Efficacy (A)	Low (a <sub>1</sub> )	54	4.87	0.99	28.84**
		High (a <sub>2</sub> )	48	5.83	0.82	
		Total	102			
	Gender (B)	Males (b <sub>1</sub> )	51	5.37	0.97	0.05 NS
		Females (b <sub>2</sub> )	51	5.42	0.95	

		Total	102			
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\*\*p<0.01

**Table II: Summary of 2x2 ANOVA for Intrinsic Motivation-Motivational Orientation of Academic Achievement Motivation as a function of Self-Efficacy and Gender.**

Source of Variance	SS	df	MS	F
Self-Efficacy (A)	24.25	1	24.25	28.84**
Gender (B)	0.04	1	0.04	0.05 NS
Self-Efficacy X Gender (AB)	1.40	1	1.40	1.66 NS
Error	82.41	98	0.84	
Total	108.10	101		

\*\*p<0 .01

Present study aimed at ascertaining the effect of self-efficacy and gender on different motivational orientations of academic achievement motivation among adolescents.

### Main Effects of Factors A & B

Table: I & II. show that the main effect of self-efficacy was found to be significant ( $F(1,101)=28.84$ ;  $p<0.01$ ). Therefore, an inference can be drawn that both the levels of self-efficacy, when compared, differ significantly on intrinsic motivation; a motivational orientation of academic achievement motivation among adolescents. Table 1 shows that the mean values of adolescents with high self-efficacy ( $M=5.83$ ) was found to be higher than the adolescents with low self-efficacy ( $M=4.87$ ) on intrinsic motivation. Hence, the present finding supported the major hypothesis of the study which stated that, Individuals with high self-efficacy would score significantly higher on intrinsic motivation as compared to individuals with low self-efficacy. These findings are consistent with previous research

evidence. Vast bodies of research have documented that that students exhibiting higher levels of self-beliefs, heighten and sustain their efforts in the face of failure because they engage themselves in the activities for pleasure and solely out of genuine interest when attempting to accomplish their goals (Bandura,1995; McGeown, et al., 2004; Brown, 2010). Such an efficacious outlook has a profound impact on the motivation and achievement in academic settings (Walker, et.al., 2006).This finding is congruent with the claims of previous researches conducted among Indian students.(Kalpana, 2019; Hasan & Parvez, 2019; Ahuja, 2016; Chowdhury & Shahabuddin, 2007).

However, the main effect of gender did not reach its significance level. Table I. reveal that no significant difference emerged between males and females on intrinsic motivation; a motivational orientation of academic achievement motivation ( $F(1,101)=0.05$  NS). It implies that male and female adolescents are similar with respect to their intrinsic motivation. Hence, the hypothesis is not accepted which stated that, females would score significantly higher on intrinsic motivation (IM) as compared to males. The results of this study were consistent with a number of previous studies. Rusillo & Arias (2004) conducted a study that indicated no gender differences were found in intrinsic motivation. Cokley, et al's. (2001) psychometric investigational study of the AMS, found that there were no statistically significant gender differences on any of the subscales of the AMS. Şahin & Çakar (2011) found no significant differences at the levels of academic motivation by gender and academic achievement. Bedel (2016) reported that gender was not a predictor of academic motivation. However, a number of Indian studies have also reported no gender differences in achievement motivation (Kaushik & Rani, 2005., Nagarathanamma & Rao, 2007., Naik & Kiran, 2018). The findings relating to gender differences in this research are contrary to previous research that found females had higher levels of overall motivation as well as intrinsic and extrinsic motivation (Brouse et al., 2010). Such mixed findings suggest that gender differences in motivation may largely be due to socialization factors rather than basic differences between males and females. The current findings did not reflect a significant gender difference, may be because of the study examined younger middle school students. Gender gap may have been more evident if the study had involved older students of post-secondary level.

## The First-Order Interaction of Factors A & B

A glance at Table II. ANOVA summary for the effect of self-efficacy and gender differences on intrinsic motivation, indicate that the interaction between self-efficacy and gender was found to be insignificant ( $F(1,101) = 1.66$  NS), did not support the hypothesis which stated that self-efficacy and gender differences would have significant effect on intrinsic motivation. Hence, it can be inferred that irrespective of levels of self-efficacy and gender, individuals did not differ in their intrinsic motivation. The findings of the current research are in congruence with prior research which suggests that there is no meaningful interaction between gender and self-efficacy in math and science lessons (Nehjad & Khani, 2014).

**Table III: F-ratios of Extrinsic Motivation - Motivational Orientation of Academic Achievement Motivation as a Function of Self-efficacy and Gender**

Dependent Variable	Independent Variables	Levels	N	Mean	Standard Deviation	F-ratio
Extrinsic Motivation	Self-Efficacy (A)	Low (a <sub>1</sub> )	54	5.90	1.22	9.74**
		High (a <sub>2</sub> )	48	5.17	1.19	
		Total	102			
	Gender (B)	Males (b <sub>1</sub> )	51	5.55	1.17	0.30 NS
		Females (b <sub>2</sub> )	51	5.59	1.06	
		Total	102			

\*\*p<0.01

**Table IV: Summary of 2x2 ANOVA for Extrinsic Motivation-Motivational Orientation Academic Achievement Motivation as a function of Self-Efficacy and Gender.**

Source of Variance	SS	df	MS	F
Self-Efficacy (A)	14.21	1	14.21	9.74**
Gender (B)	0.44	1	0.44	0.30 NS
Self-Efficacy X Gender (AB)	1.45	1	1.45	0.99 NS
Error	142.99	98	1.459	
Total	159.09	101		

\*\* $p < 0.01$ 

Table III & IV show that the main effect of self-efficacy was found to be significant ( $F(1,101)=9.74; p < 0.01$ ). Therefore, an inference can be drawn that both the levels of self-efficacy when compared, differ significantly on extrinsic motivation; a motivational orientation of academic achievement motivation among adolescents. A scrutiny of results of Table III shows that the mean values of adolescents with low self-efficacy ( $M=5.90$ ) was found to be higher than the adolescents with high self-efficacy ( $M=5.17$ ) on extrinsic motivation. These results led to the acceptance of the hypothesis which stated that, Individuals with low self-efficacy would score high on extrinsic motivation as compared to individuals with high self-efficacy. The possible explanation of this finding may be that students have convictions about their own capacity for successfully executing a task to desired outcomes. When the perceived self-efficacy is low, failure is perceived as a likely outcome. It seems logical to assume, therefore, poor belief in one's ability impacts motivation and performance. In the face of poor performance or failure the behaviour is prompted by external contingency such as reward, punishment and deadlines where the performed behaviour is not internalized which typically produces immediate results and requires less effort in comparison to intrinsic motivation (Ryan & Deci, 2000). The down side of it is that extrinsic contingencies can often distract students from doing an activity for itself, and the pleasure and satisfaction derived from participation. Another problem with extrinsic motivation is that they typically do not work over the long term. Once, the rewards are removed, students lose their motivation (DeLong & Winter, 2002). As extrinsically motivated, students tend to focus on earning higher grades and obtaining rewards, Biehler and Snowman (1990) believed that extrinsic motivational factors can diminish students' intrinsic motivation (Bain, 2004).

As per Table III, results of gender based analysis of extrinsic motivation indicate that both males and females did not differ significantly on extrinsic motivation ( $F(1,101)=0.30NS$ ) which refers to the behaviours that are pursued not for sake of deriving personal pleasure or satisfaction from learning or exploring an educational activity but for attaining an outcome

such as earning a good grade or avoiding teacher’s reprimand (Deci et al.,1991). Difference between mean values of both gender groups was almost comparable which failed to shed light on any differences. The present finding did not support the hypothesis of the study i.e., males would score significantly higher on extrinsic motivation as compared to females. Present exploration was not in consonance with past literature available on gender differences in students’ extrinsic motivation, where the males were reported to be more extrinsically motivated (Rusilo & Arias, 2004).

### **The First-Order Interaction of Factors A & B**

A glance at Table IV, ANOVA summary for the effect of self-efficacy and gender differences on extrinsic motivation, indicate that the interaction between self-efficacy and gender was found to be insignificant ( $F(1,101)=0.99$  NS), which did not support the hypothesis which stated that self-efficacy and gender differences would have significant effect on extrinsic motivation. Hence, it can be stated that irrespective of levels of self-efficacy and gender, individuals did not differ in their extrinsic motivation.

**Table V: F-ratios of Amotivation-Motivational Orientation Academic Achievement Motivation as a Function of Self-efficacy and Gender**

Dependent Variable	Independent Variables	Levels	N	Mean	Standard Deviation	F-ratio
Amotivation	Self-Efficacy (A)	Low ( $a_1$ )	54	2.63	1.43	13.73**
		High ( $a_2$ )	48	1.67	1.04	
		Total	102			
	Gender (B)	Males ( $b_1$ )	51	2.22	1.27	2.22 NS
		Females ( $b_2$ )	51	1.96	1.18	
		Total	102			

\*\* $p < 0.01$

**Table VI: Summary of 2x2 ANOVA for Amotivation-Motivational Orientation Academic Achievement Motivation as a Function of Self-Efficacy and Gender**

Source of Variance	SS	Df	MS	F-ratio
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Self-Efficacy(A)	21.57	1	21.57	13.73**
Gender (B)	3.49	1	3.49	2.22 NS
Self-Efficacy X Gender	1.54	1	1.54	0.98 NS
Error	153.97	98	1.57	
Total	159.09	101		

\*\*p&lt;0.01

### Main Effects of Factors A & B

Table V & VI. show that the main effect of self-efficacy was found to be significant ( $F(1,101)=13.73<0.01$ ). Therefore, an inference can be drawn that both the levels of self-efficacy, when compared, differ significantly on amotivation; a motivational orientation of academic achievement motivation among adolescents. Table V shows that the mean values of adolescents with low self-efficacy ( $M=2.63$ ) were found to be higher than the adolescents with high self-efficacy ( $M=1.67$ ) on amotivation. Hence, the findings of the present research lent the complete support to the hypothesis of the study which stated that, individuals with low self-efficacy would score significantly higher on amotivation as compared to individuals with high self-efficacy. In true sense, self-efficacy has been identified as a predictor of adolescent success in life (Perry et al., 2007), but lower sense of efficacy for learning and performing well in school can negatively affect student's motivation and engagement (Pajares, 1996 & Walker et. al., 2006). It seems logical to understand that poor belief in one's ability is a driving component of feeling disinterested towards academic activities. An intervention can be proposed to enhance self-efficacy which effect academic achievement motivation substantially. When ascribing their failures to low competence, children can be given effort attributional feedback by being told that they should expend more efforts or plan better strategy. Because effort presumably is under volitional control, ascribing past failures to the insufficient effort should have motivational effects that lead to greater task persistence and a higher academic motivation and performance level.

However, the main effect of gender did not reach its significance level. As Table V reveals that no significant difference emerged between males and females on amotivation; a motivational orientation of academic achievement motivation ( $F=2.22NS$ ). It implies that males and females did not differ regarding their amotivation. Vallerand et al., (1992) mentioned that amotivated individuals are neither intrinsically nor extrinsically motivated. Individuals believe their behaviours are impersonal or out of their control. Hence, the hypothesis is not accepted which assumes that males would score significantly higher on amotivation (IM) as compared to females. Although the current outcome could not attain empirical support yet, the present findings are consistent with previous research evidence (Brouse et al., 2010).

### **The First-Order Interaction of Factors A & B**

A glance at Table VI- ANOVA summary for the effect of self-efficacy and gender differences on amotivation, indicate that the interaction between self-efficacy and gender was found to be insignificant ( $F(1,101)=0.98NS$ ), which did not support the hypothesis which stated that self-efficacy and gender differences would have significant effect on amotivation. Hence, it can be found out that irrespective of levels of self-efficacy and gender, individuals did not differ in their amotivation.

### **Significant findings that emerged from 2X2 ANOVA were:**

1. Adolescents with high self-efficacy scored significantly higher on intrinsic motivation as compared to adolescents with low self-efficacy.
2. Adolescents with low self-efficacy scored significantly higher on extrinsic motivation and amotivation - motivational orientations of academic achievement motivation as compared to adolescents with high self-efficacy.

Thus the findings of the present study showed that students who have confidence in their capabilities are intrinsically motivated which is the most beneficial form of motivation for students' achievement. In contrast, students who have doubts about their ability lack

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academic motivation. Our findings highlight the importance of encouraging students to attribute their failure to adaptive attributions. These findings can serve to provide practical guidelines for designing of interventions to enhance self-efficacy and achievement motivation. Students can be trained to attribute their poor performance to internal, controllable and unstable factors such as lack of effort and wrong strategy use. Effects of past academic success can provide feedback on subsequent self-efficacy and in turn on future motivation and performance. Another way to intervene in and optimize academic motivation and self-efficacy is attributional feedback which constitutes a persuasive means of conveying efficacy information. Often, the key to motivate the struggling learners is to get them believe that they can succeed. Telling children that they have been working hard should convey that they are competent enough that they can actualize their potential through sustained efforts informs learners of their goal progress, strengthens self-efficacy and sustains motivation. Training should include a variety of components that are consistent with theoretical cues for building efficacy (Bandura, 1997) the use of role-playing to provide experiences of success, performance models by vicarious experiences, coaching and social persuasion from teachers. Thus, even when students report having low self-efficacy, helping them view failure as an outcome that they can control may increase their expectancy for success and lead to actual successful experiences.

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