

# Causal Attributions For Success And Failure Among Higher Education Students

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**Abstract:** *This study was aimed to analyse the causal attributions of higher education students and to find the relationship between the successful and unsuccessful student's causal attributions to exam scores studying in different semesters of under graduate and post graduate science program. A total number of 406 respondents filled the "The revised causal dimension scale" (CDSII). A confirmatory factor analysis was conducted in order to substantiate the construct validity of the scale. In order to examine the relationship Pearson Chi-Square test was performed. The results indicated that there exists significant relationship between the successful and unsuccessful student's causal attributions to exam scores. The successful students attributed their success to internal, stable and controllable causes more frequently and unsuccessful students attributed poor efforts and lack of ability as a major cause for their failure.*

**Keywords:** *Success; Failure; Causal attribution; Higher education*

## Introduction

Over the past few decades, researchers have been focussed on studying and understanding the causal attributions of the learners towards success and failure. The work on giving a concrete shape to the causal attribution framework is started in early 1960s. Many social and psychological researchers actively worked for enriching the concept of causal attribution. Heider (1958) was the first who attempted to coin the word "Attribution" in his famous book, "The Psychology of Interpersonal Relations". Since then, many researchers have conducted various researches on different sample in this particular area worldwide. His causal attribution framework mainly considered the two types of causalities viz. "Personal Causality" and "Impersonal Causality". The "impersonal causality", deals with unintentional human behaviours (i.e. worry and sadness) and physical events (i.e. leaf shedding). Likewise, the "personal causality" which is invoked whenever there are intentional human behaviours (such as cleaning the home or inviting someone to lunch). According to Heider, personal causality is the situation where 'q' causes 'x' intentionally, which is considered as a purposive action. Heider proposed person-situation dichotomy in attribution. He argued that outcome of the action depends upon personal and situational forces. He illustrated that for an action outcome to occur, there is need of the conjunction of two elements (Try x Can), person's attempt to perform an action (Try) and the supporting factors (Can), which are either person's effort and ability or the environment i.e. luck and favourable situations. He considered 'Trying' as an intention of the person (personal causality) and 'Can' forces can be personal or situational. According to him these 'Can' forces are essential for an intentional action to be successful. At this, Heider introduced the division between internal and external. He considered effort and ability as internal and opportunity, luck favourable situations as external causes of the action outcome.

The theoretical base of causal attribution was further enriched by Kelley in 1967 in his "Covariation Model of Attribution". This model explained the covariation among Consensus, Consistency and Distinctiveness, the unique combinations of these factors give

rise situational, dispositional or circumstance attributions. The “Consensus” deals with the generalisation of the experiences with respect to the other people. The “Consistency” deals with the consistency of the response to a specific stimulus over the time. However, distinctiveness, is the uniqueness of the behavior in the particular situation. It indicates that whether the behavior of the person occurs along with the stimulus or not without it. The theory postulated by (Kelley 1967) was linked with the causal attribution framework given by (Heider 1958). It was advocated by (Kelly 1967) that the high consensus, high consistency and high distinctiveness indicates that an actor is attributing the situational or environmental causes (i.e. external) for his or her achievement. Likewise, the pattern, low consensus, high consistency and low distinctiveness indicates that an actor is attributing dispositional causes (i.e. internal) causes for success or failure. Thereafter, a three-dimensional model for causal attribution viz. “Locus of Causality”, “Stability” and “Controllability” was proposed by (Weiner 1985). The learners mainly attribute their success/failure to either internal causes or external causes. For example, ability, aptitude, are internal, stable and uncontrollable attributions, efforts are the internal, unstable and controllable attributions. On the other side, task difficulty, luck and health are external, unstable and uncontrollable attributions. The revolutionary theory in the field of attribution given by (Weiner 1985) was widely used in social and psychological area. The theory postulated that perceiving the cause as “internal or external”, “stable or unstable” and “controllable or uncontrollable” directly or indirectly influence the behaviour and in turn influence the academic performance of the learners. The students who are considered as self-handicappers often scared of breakdown and generally try to find a pretext for a failure and engage themselves in tasks-irrelevant behaviours. This provides an attributional cover to them and concurrently, dwindle the probability of achievement. The outcome as a result of self-handicapping will come as individual with pessimism or motivation which will in turn defines the results. The perspective of self handicapping is that it points to the sense of worth and is handy.

An abundant amount of work has been done in analysing the causal attributions of male and female students and successful and unsuccessful students. The researches in higher education as exhibited that self handicapping results into poor study success and wellbeing (Eronen, Nurmi and Salmela-Aro 1998; Jones and Berglas 1978). According to Beyer (1998), Lohbeck, Grube and Moschner (2017) and Wolleat et al. (1980) the male students attributed their success to their ability while female students attributed their success to efforts. Apart from this, female students attributed their failure to the lack of mathematical ability and task difficulty. Cochran, McCallum and Bell (2010) reported that female students scored more on effort attributions for success as compared to their male counterpart. Gobel et al. (2013) revealed that the urban area students attribute their success to the internal causes like, ability, sustained efforts and study skills as compared to rural area students. According to Pishghadam and Motakef (2011) mathematics and science students showed high mean scores in attributing their success in language learning to positive emotions and self-image as compared to Humanities students. The previous researches have reported that the successful students attributed their success to internal, stable, personally controllable factors and unsuccessful attributed their failures to external, unstable other than personal controllable and external controllable dimension (Basturk and Yavuz 2010; Cortes-Suarez and Sandiford 2008 ; Dasinger 2013; Genc 2016; Gosiewska-Turek 2017; Hassaskhah and Vahabi 2010; Mohammadi and Sharififar 2016; Perry et al. 2008; Shaukat, Abiodullah and Rashid 2010; Soric and Palekcic 2009). On the contrary, Lei (2009) reported that college students attributed their successful results to external factors, while in failure to internal factors. Saez et al. (2018) showed positive and strong correlation between willingness to study strategies and effort attributions for success and weak positive association with ability attribution for success. Gargari, Sabouri and Norzad (2011) examined the correlation between causal description and procrastination and found showed negative correlation between

procrastination and causal attribution for the success, and a positive correlation between procrastination and causal attribution for the failure. However, Vlachou and Buchel (2000) found no significant correlation between success and failure outcomes for effort, ability, task and luck. On the contrary, Gobel and Mori (2007) found statistically significant correlation between attributions of ability, task difficulty and luck and exam scores. Dong et al. (2013) advocated that effort was the first rated attribution for the success followed by teacher, practice and text book. On the other side, students attributed lack of efforts, interest, practice, time management, teacher, bad luck for explaining their failure. Zimmerman (2000) explored that self-regulated learners are more likely to comprehend poor performance as being due to inadequate attempts or the execution of futile learning strategies. Some previous researches confirmed that both male and female students differ from each other in the use of self-regulated learning strategies, further it has been found that girls scored higher on self-regulated learning skills such as planning, strategy using and assessment and total self-regulated learning skills and no significant gender difference has been found w.r.t causal attribution for success and failure Leana-Tascilar (2016). Gibb et al. (2002) reported that the students who made internal and stable attributions for negative outcomes, have low level of academic ability and receive low GPA. While, Perry et al. (2001) revealed that, students with low self-control, obtained worse grades and have lesser inspiration and apply less efforts. It has been found in the previous experimental researches that attributional retraining has positive impact on enhancing the motivation of the students for getting good results. Haynes et. al. (2008) reported that attributional retraining may enhance the mastery motivation but did not show any influence on performance motivation. Stewart et al. (2011) revealed that the group of students who got attributional retraining were less likely to fail and achieved good scores. Likewise, Hamm et al. (2017) showed that students with low cognitive elaboration, who received attributional retraining scored more in class test than their peers who got stress reduction treatment and the results of path analysis indicated that attributional retraining performance was mediated by causal attributions, perceived control and positive and negative achievement emotions. According to Gordeeva and Osin (2011,) attributional styles for both positive and negative events are correlated to well-being but did not show specific relationship with academic achievement, whereas, Mahasneh et al. (2013) found positive correlation between positive attribution style and extroversion but no correlation has been observed between negative attribution style and any of the personality trait. In addition, male and female students do not differ significantly on their attribution style. Anthony (2000) found university students and professors tended to view factors outside their control as more influential than those within their control. Hsieh and Schallert (2008) advocated that self-efficacy was the strong predictor of the success of the students and the students who attributed effort attributions for the failure have higher self-efficacy. Erten and Burden (2014) found that the academic self-concept, ability, interest and teacher related attributions found good predictors of the performance in the class test. Maymon et al. (2018) confirmed that stability dimension predicted more negative emotions specifically, in unexpected problems. It has been found from the above cited reviews that much work has been done on studying the causal attribution in many countries but, there is paucity of the researches in studying the causal attribution of higher education students, particularly in Indian situations.

The main aim of the present research was to analyse the causal attributions of higher education students and to find the relationship between the successful and unsuccessful student's causal attributions to exam scores studying in different semesters of under graduate and post graduate science program.

## **Method**

### **Participants**

Keeping in view the scope of the study, a data of 406 respondents were collected from different government and private universities and colleges of Punjab state of India. The data

was collected only from the students who were enrolled in undergraduate and post graduate programs of Sciences. Further, among the sample of undergraduate program (i.e. Bachelor of Science), 90 (35.4 per cent) respondents were from first semester, 65 (25.6 per cent) from second semester and 99 (38.9 per cent) from third semester. From M.Sc (Chemistry), 152 (37.4 per cent) respondents were taken only from the second semester. Apart from this, data was dichotomised on the basis of perceived success or failure about his/her achieved score. The volunteers filled the questionnaire under the supervision of the researcher.

### **Measure**

In order to measure the causal attributions of the students, “The Revised Causal Dimension Scale (CDS II)” developed by McAuley et al. (1992) was used. The Revised Causal Dimension Scale (CDSII) was designed to assess the causal perceptions of an individual in terms of “locus of causality”, “stability” and “controllability” dimensions as described by Weiner (1985). “The Revised Causal Dimension Scale” (CDSII) contains 12 items, each with a semantic scale from 9 to 1. Each of the three items from the CDSII relate to “Locus of Causality” (items 1,6,9), “Stability” (items 5,8,12), “Personal Controllability” (items, 2,4,10) and “External Controllability” (items 5,8,12).

### **Results**

#### **Reported Causal Attributions**

A summary of the reported attribution by the students have been presented in the table1. It is clear from the table 1 that in case of B.Sc 2nd semester students the most rated cause for their achieved score was study habits (24 students, 26.7 per cent) followed by efforts (20 students, 22.2 per cent), ability (18 students, 20 per cent), luck (4 students, 16.7 per cent) and task difficulty (4 students, 16.7 per cent). In case of B.Sc 4th semester, the most rated cause for the achieved score was study habits (23 students, 35.4 per cent) followed by efforts (15 students, 23.1 per cent), instructor’s bias (9 students, 13.8 per cent), ability, luck and task difficulty rated by (6 students, 9.2 per cent). In case of B.Sc 3rd semester, the most common cause reported by the students were again, study habits (34 students, 34.3 per cent), followed by effort and luck (19 students, 19.2 per cent), ability (16 students, 16.2 per cent), task difficulty (7 students, 7.1 per cent) and instructor’s bias (4 students, 4 per cent). Likewise, in case of the students of M.Sc. (Chemistry) 2nd semester, the most rated cause was study habits (54 students, 35.5 per cent) followed by efforts (33 students, 21.7 per cent), ability (24 students, 15.8 per cent), instructor’s bias (12 students, 7.9 per cent), task difficulty (11 students, 7.2 per cent), luck (8 students, 5.3 per cent), mood (6 students, 3.9 per cent) and teacher’s help (4 students, 2.6 per cent). It is clearly observable from the table-1 and figures 1,2 and 3 that in all semesters students rated study habits, a main cause for their achieved score and the students who perceived that their achieved score as successful, rated study habits as a major cause for their success. Likewise, the students who considered their achieved score as unsuccessful rated efforts followed by the ability for their failure. This shows that successful students attributed internal, stable and controllable causes for their success and unsuccessful students attributed to internal, unstable and controllable causes. It is clear from the following figure 1 that the highest rated cause was study habits and least rated was teacher’s help.

	Bachelor of Science									Master of Science (Chemistry)		
Classification based on CDSII	B. Sc 2 <sup>nd</sup> Semester			B.Sc 4th Semester			B.Sc 6th Semester			M.Sc 2 <sup>nd</sup> Semester		
	UnS	S	Total	UnS	S	Total	UnS	S	Total	UnS	S	Total
Ability	12 (28.6%)	6 (12.5%)	18 (20%)	2 (8.3%)	4 (9.8%)	6 (9.2%)	6 (20.7%)	10 (14.3%)	16 (16.2%)	15 (34.1%)	9 (8.3%)	24 (15.8%)
Efforts	12 (28.6%)	8 (16.7%)	20 (22.2%)	10 (41.7%)	5 (12.2%)	15 (23.1%)	5 (17.2%)	14 (20%)	19 (19.2%)	16 (36.4%)	17 (15.7%)	33 (21.7%)
Study Habits	1 (2.4%)	23 (47.9%)	24 (26.7%)	3 (12.5%)	20 (48.8%)	23 (35.4%)	0	34 (48.6%)	34 (34.3%)	1 (2.3%)	53 (49.1%)	54 (35.5%)
Mood	5 (11.9%)	1 (2.1%)	6 (6.7%)	0	0	0	0	0	0	4 (9.1%)	2 (1.9%)	6 (3.9%)
Luck	7 (16.7%)	4 (8.3%)	11 (12.2%)	4 (16.7%)	2 (4.9%)	6 (9.2%)	11 (37.9%)	8 (11.4%)	19 (19.2%)	2 (4.5%)	6 (5.6%)	8 (5.3%)
Task Difficulty	3 (7.1%)	2 (4.2%)	5 (5.6%)	4 (16.7%)	2 (4.9%)	6 (9.2%)	5 (17.2%)	2 (2.9%)	7 (7.1%)	2 (4.5%)	9 (8.3%)	11 (7.2%)
Instructor's bias/ Favoritism	0	4 (8.3%)	4 (4.4%)	0	9 (22%)	9 (13.8%)	2 (6.9%)	2 (2.9%)	4 (4%)	1 (2.3%)	11 (10.2%)	12 (7.9%)
Teacher's Help	2 (4.8%)	0	2 (2.2%)	0	0	0	0	0	0	3 (6.8%)	1 (0.9%)	4 (2.6%)

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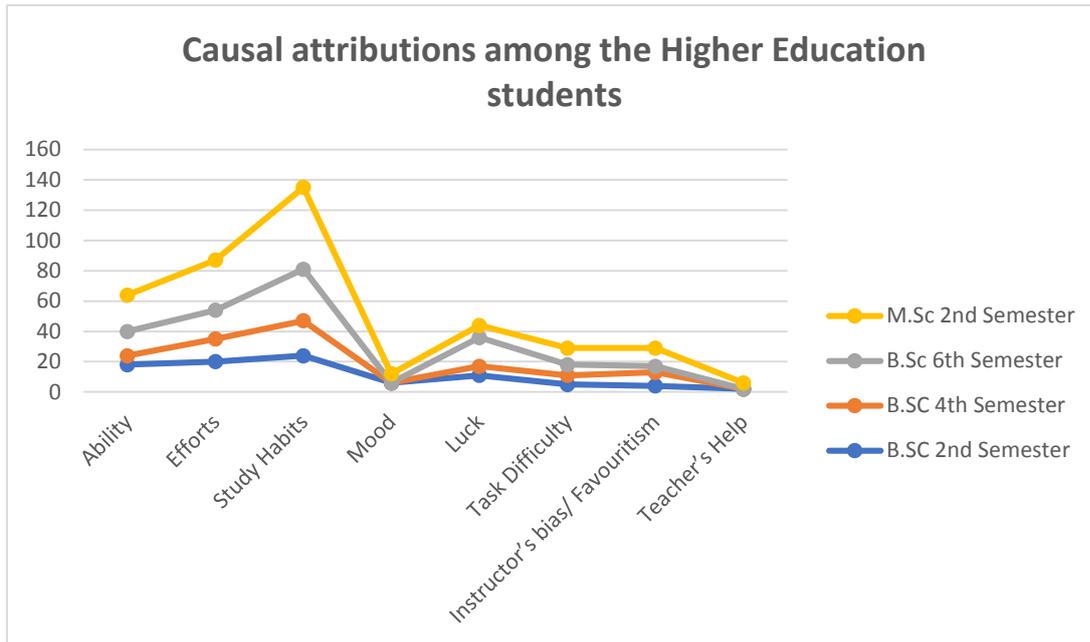


Figure 1: Causal attributions among the Higher Education students

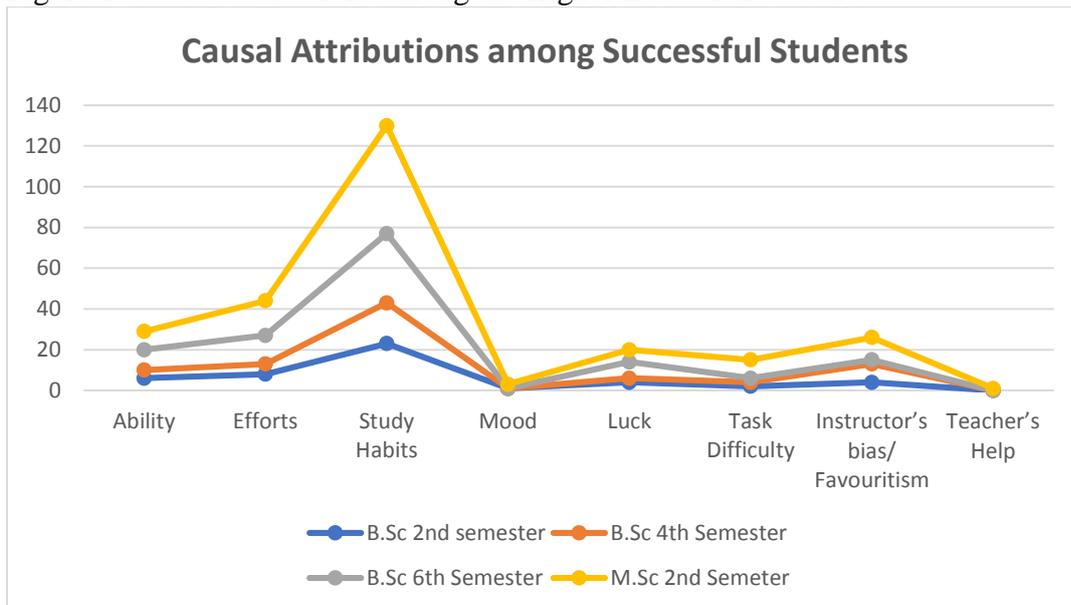


Figure 2: Causal attributions among successful students

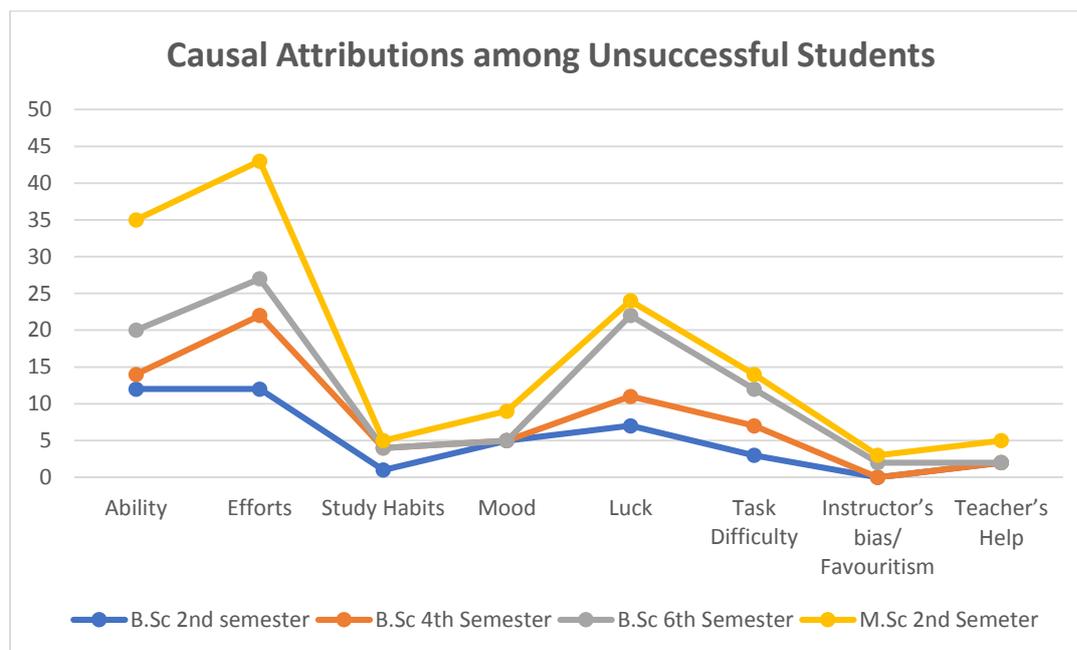


Figure 3: Causal attributions among unsuccessful students

### Testing the relationship between successful and unsuccessful student's causal attributions to exam score

In order to examine the relationship between successful and unsuccessful student's causal attributions to exam score studying in 2nd, 4th and 6th semesters of Bachelor of Sciences and 2nd semester of Master of Sciences (Chemistry). The obtained scores were subjected to Pearson Chi-Square test and the results have been presented in the table-2.

Semester	B. Sc			
	df	N	$\chi^2$	p-value
2nd Semester	6	90	32.39**	0.00
4th Semester	6	65	22.88**	0.00
6th Semester	7	99	30.62**	0.00
2nd Semester	M.Sc (Chemistry)			
	7	152	49.97**	0.00

\*\* significance level of  $p < 0.01$

It is clear from the table-2 that, for B. Sc 2nd semester students, the relationship between unsuccessful and successful student's causal attribution on achieved score was significant, with  $\chi^2(7, 90) = 32.39$ ,  $p < 0.01$ . Further, for B. Sc 4th semester students, the relationship between unsuccessful and successful student's causal attribution on achieved score was also significant, with  $\chi^2(6, 65) = 22.88$ ,  $p < 0.01$ . Likewise, for B. Sc 6th semester students, the relationship between unsuccessful and successful student's causal attribution on achieved score was also significant, as  $\chi^2(6, 99) = 30.62$ ,  $p < 0.01$ . For M.Sc. (Chemistry) 2nd semester, the relationship between unsuccessful and successful student's causal attribution on achieved score was also significant, with  $\chi^2(7, 152) = 49.97$ ,  $p < 0.01$ . Hence, it is confirmed that there is significant relationship between the unsuccessful and successful student's causal attributions to exam scores. The results of the present study enjoy support from the results of previous researches, who reported that there is significant relationship between low and high achieving students' attributions to their achieved scores (Weiner 1972; Wolleat et al. 1980).

## Discussion

The significant relationship has been found between the successful and unsuccessful student's attributions to exam scores in the present study. The successful students in 2nd, 4th and 6th semesters of undergraduate program of sciences and 2nd semester of post graduate program of Chemistry attributed their success to their study habits which is an internal, stable and controllable attribution. This shows that the successful students possess good study habits and make good use of their learning strategies. They always study hard for getting success in academics. After study habits, efforts and ability was the most cited attribution and a very little preference has been given to mood, luck and help from the teachers. Successful students maintain their internal, stable and controllable attributions throughout the year, this attribution adds to their constructive cognitions and behaviours and in turn results in high motivation and self efficacy. On the other side, the unsuccessful students attributed effort attributions as a main cause for their failure followed by the ability attributions. According to Haynes et al. (2009) effort attributions are controllable. If the unsuccessful students are making effort attributions, it means they know that they got failure due to lack of efforts during the exam time and they are hopeful that if they devote more time and do hard work then they can be successful. The effort as a causal attribution has very constructive implications for students' academic performance because effort is a personal controllable, changeable attribution to (Weiner 1985). Hence, the present study supported Weiner's claim. The ability attributions with poor result hamper the intrinsic motivation, action of the student and tend to increase the depression, anxiety, learned helplessness among the students (Peterson and Buchanan 1995; Van Laar 2000) and disengage the students from learning activities (Aronson et al. 2002). The ability attributions among unsuccessful students influence the sense of controllability of the students and hinder the learning process of the students. According to Cokley (2003) there is a direct link between efforts and the GPA of the students. Gobel and Mori (2007) reported that students often make internal, unstable and personally controllable attributions for their failed result in an exam. Such kind of attribution is enabling the students to appraise their strengths and weaknesses critically and act accordingly to fix those weaknesses. Likewise, Perry et al. (2008) also found that low efforts were the most common cause mentioned by the unsuccessful students followed in order by test difficulty, poor strategy, professor quality, natural ability, and bad luck. The college students who attributed lack or insufficient efforts for their failure would blame themselves, feel guilt yet hopeful and be inspired and motivated to put more efforts in order to improve their scores and performance in the exam and give protection to their self- efficacy (Covington 2007). On the contrary, the results of the present study are inconsistent with the results previous researches, whom reported that unsuccessful students often attribute their failure to external causes like luck, difficult task and teacher (Bond, Leung and Wan 1982; Brown and Kobayashi 2002; Chiu 1988; Cortes-Suarez and Sandiford 2008; Dasinger 2011; Heine et al. 2001; Kurman 2003; Perry et al. 2008; Sedikides, Gaertner and Toguchi 2003; Yan and Gaier 1994).

## Limitations and the Future Research

The major limitation of the present research was the small sample size in comparison to the huge number of higher education students, which limits the generalisability of the results. The total number of students who have perceived their achieved score as unsuccessful were less as compared to successful students. As the study was based on self-report data and thus subject to social desirability bias.

Although Success and failure is the part and parcel of one's life, but one should be able to face and come out from the situation of failure. Education and an educator are the most powerful agent to mould the personality of the student at all levels of education. At every stage right from the school till university, students face great deal of challenges and

there are some who get out from it on their own and there are some who need a helping hand (i.e. at-risk students). These students often blame their failure to their lack of ability and ability attributions hinder their cognitive growth and encourage self-handicapping. So, the future research should be done on giving attribution training to those unsuccessful students who are stuck with the perception of lack of ability. Ability attribution should be changed to effort attribution, which will enable the student to think positive and hopeful for getting success in future. The present study got support from the previous researches done in educational settings worldwide. The results of the present study will add strengths to the literature and will be helpful for the researchers, administrators, teachers and policy makers to explore more about the causal attribution and attribution retraining.

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