

## A STUDY TO INVESTIGATE THE RELATIONSHIP BETWEEN LOCUS OF CONTROL AND ACADEMIC ACHIEVEMENT OF STUDENTS

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### ABSTRACT

Motivation is regarded as the alpha and omega of learning .It is the heart of teaching learning process. Motivation is defined as an internal state that arouses, directs, and maintains the behavior over time. Thus motivation is the pivotal component of learning and locus of control which is one of the important factors it stems from. Locus of control is a belief about the primary source of a person's behavior- either internal (within a person) or external (with in a person's physical and social environment). The main aim of this research was to measure the locus of control of students in order to determine the degree of their externality or internality of locus of control. And to find out the gender difference in locus of control orientation at College and University levels to relate the locus of control with academic achievement. Sample of study consisted of 466 students, out of which 205 were boys and 261 were girls. This sample was chosen from two female college and one male college located in Rawalpindi city and one Co-education University Institute located in Islamabad city. The college students were mostly of 16 and 17 years age group, where as University students were in the 20 and 21 year age group. For the purpose of measuring locus of control questionnaire was used with a few modifications. Academic achievement was measured by the marks obtained by the sample in their recently held examination at their institutions. The obtained data were analyzed and interpreted using statistical tools such as: Mean Standard Deviation, t-test and correlation coefficient. The results show that the majority of students were found to be more internal than external in their locus of control. This result is enlightened with others studies that, locus of control and academic achievement were related positively to each other. Boys were found to be more internal than girls at college level however, no gender differences in locus of control were found at the University level.

Keywords: Locus of Control, Internal and External, Relationship, Academic Achievement

### INTRODUCTION

Motivation is one of the most important components of learning. It holds a pivotal role in the teaching learning process. Though teacher's motivation level occupies a very important position, yet it is always dependent on the students' process. Motivation is the heart of learning. A stronger inner urge will mean the stronger efforts. Adequate motivation not only sets in motion the activity, which results in learning, but also sustains and directs it. It is concerned with the arousal of interest in learning (Chand, 1990).

Bhatia (1997) states that, "Motivation is an important factor in learning process. Motivation implies the arousal and maintenance of interest in learning where interest is a

basic factor in learning. No learning can take place without the interest of the learner. This means that the motivation plays a vital role in learning. In fact no real learner is in proper frame of mind for learning. It concentrates the attention and energy of a person on the activity or knowledge to be learnt."

According to Morgan (1974), "Motivation as a term has proved to be very illusive concept. The psychologists have studied it at great length and they have arrived on different definitions on it. Motivation is the term which is covering out about everything that psychologists want to say about the subject. It has three distinct aspects such as, some motivation state within the person impelling him toward some goal, the behavior he displays striving for the goal, and achievement of the goal." Motivation may be

regarded as something, which prompts and energizes an individual to act or behave in a particular manner at time for attaining some specific goal or purpose

Considerable research has been done based upon the theories of motivation. The overriding concern with motivation theories are due to interest in behavioral science. The works of Darwin and Freud have given fillip to this field of psychology. Since nature and motives of men have been described variously from time to time, it has given rise to various theories of motivation (Decenzo, 1971). Current theories of motivation include Maslow's hierarchy of needs, McClelland's Achievement Motivation, Rotter's Locus of Control, Wiener's Attribution Theory (Crowl et al., 1997).

The first variable of the proposed research is "locus of control". The term 'locus of control' was originally introduced by Rotter (1954) whose thinking reflects a blend of humanistic and behavioristic tradition. Rotter was not only the first to define the concept, but also presented a social learning theory framework, in which it could be incorporated.

## Literature Review

Rotter (1975) looks at motivation as a mental phenomenon. Locus (location) is a personal belief about who can control the consequences of one's action. People with external locus of control believe that the consequence of their action (success and failure) is controlled by others. They do not see a strong link between their efforts and outcomes, and between their action and consequences of that action. People with internal locus of control believe that they have a direct control upon the outcomes of their action. Some personalities are external, some are internal but most of the personalities are neither completely external nor internal (Arif, 2003). Maer (1976), has operationally defined locus of control as, "It describes continuum of belief as whether one's outcomes are the result of internal control (e.g. effort) or external control (e.g., powerful other or fate)".

Locus of control is a personality trait that is concerned on whether people attribute responsibility for their own failure or success to internal factor or external factor. One central

concept to attribution theory is locus of control (Rotter, 1954). The word "locus" means location. A person with an "internal locus of control" is one who believes that success or failure is located in his or her own efforts or abilities. Someone with an "external locus of control" is more likely to believe that other factors, such as luck, task difficulty, or other people's action, cause success or failure (Slavin, 1994).

Locus of control is assessed on a continuum, ranging from internal to external. Individuals at the internal end of this continuum are called as having internal locus of control, while those at the external end are those who have external locus of control. According to Rotter (1975), internalizes are those people who believe that they are autonomous, who are the master of their own fate and bear personal responsibility for what happens to them. In contrast, Externalizes view themselves as helpless pawns of fate, controlled by outside forces over which they have little influence, if any.

In educational setting, perceptions of control refer to the students' personal view of the source of control over task outcomes, that is the cause of success and failure in educational task. Researchers (Nicholls, 1984; Weiner, 1984) have indicated that students who attribute their successes and failures in educational tasks in internal and controllable sources (e.g. students' own efforts or students who use of appropriate strategies) are more likely to persist in the face of difficulty. On the other hand, students attribute their success and failure to external uncontrollable source (e.g. powerful others, luck task difficulty or inherent abilities) are more likely to give up when they come across difficulties in their learning.

One concept that is central to attribution theory is locus of control (Rotter, 1966). Locus of control refers to the type of attribution students make for their success and failure on their school task. People with an external locus of control attribute the outcome in their lives to their own action and choice. Locus of control is defined in the Meyers textbook as the extent to which people perceive outcomes as internally controlled by chance or outside forces. In other words, there are two extremes in locus of control, Those who feel that they control the events that happen

throughout their lives have an internal locus of control, and those who feel that outside forces are responsible for their fate have an external locus of control. Persons with an internal locus of control are considered to be more likely to higher success rates in school. Research helps us to understand role-play by self-confidence and a feeling of being in control. For example, research suggests that students perform at higher levels if they have confidence in themselves, and personal efficacy is a matter of internal locus of control. Students with more internal locus of control attribute their success to their own abilities and not to luck or chance, as do persons with external locus of control. When students realize that, their thoughts control their action (i.e. their locus of control is internal) and they can positively affect their own beliefs, motivation and academic performance. Rotter (1966) developed the locus of control as an attempt to combine the older, which are more established enforcement approaches with the newly developed cognitive approach of attribute comparatively performed better than those who made an external attribution. It has been also established that students with an internal locus of control spent more time, whereas those with an external locus of control spent more time at the same task.

Researchers investigated locus of control, academic and sex of 9th grade students by administrating the 'Nowsickland Locus of Control Scale' to 267 students from three secondary schools in a suburban community. The researchers wanted to determine if these factors were related to the expectation that locus of control is correlated with the exam scores. The result of the study indicated that, their hypothesis was correct. The advance level students were significantly more internal than general level students, although basic level students did not differ significantly from advanced or general level students.

Although much work has been done on locus of control factor in the outside world, educational curriculum and teaching methodology were never built upon those concepts and all subjects were being treated alike. It was high time that steps were taken ahead in using new and innovative concepts for teaching the young folk.

## Objectives of the study

The objectives of the study were as follows

- To measure the students' locus of control regarding their success & failure.
- To compare male and female students at college and university level separately on the variable of locus of control.
- To investigation the relationship between locus of control and academic achievement.

## Hypotheses

The following Null hypotheses were formulated.

- There is no significant relationship between the locus of control scores and academic achievement scores of all female students.
- There is no significant relationship between the locus of control scores and academic achievement scores of all male students.
- There is no significant relationship between the locus of control scores and academic achievement scores of all male and female students.
- There is no significant relationship between the locus of control scores and academic achievement scores of male college students.
- There is no significant relationship between the locus of control scores and academic achievement scores of female college students.
- There is no significant difference between the mean scores on locus of control of male and female college students.
- There is no significant difference between the mean scores on locus of control of male and female University students.
- There is no significant difference between the mean scores on locus of control of female college and university students.
- There is no significant difference between the mean scores on locus of control of male college and university students.
- There is no significant difference between the mean

scores on locus of control of all male and female students.

## Research methodology

Following methods and procedures were adopted for this study.

### Population

The target population comprised of about 3000 college students of 25 Government colleges located in the Rawalpindi city and approximately 8000 students of 5 private sector universities located in Islamabad city.

### Sample

Sample of the study consisted of 466 students. This sample was chosen from two female colleges and one male college located in Rawalpindi city and one co-educational University Institute located in Islamabad city and the sample was chosen randomly.

### Research Design

The proposed research was correlation in nature.

### Research Instrument

In order to measure locus of control, the questionnaires consisted of 20 items. Each item consisted of two alternative responses. These questionnaires were developed by Rotter(1966) and has been used extensively in various studies. The researcher used the questionnaires with some modification. For example, some irrelevant items were wiped out from the questionnaires, because of being irrelevant to our culture. The items in the questionnaires were converted into simple English and then translated into Urdu so as to get high response with accurate information from the respondents.

### Data Collection

The data was collected by the researchers themselves through one questionnaire (for measurement of the variable of locus of control) developed and validated through Pilot Testing. Reliability of the research tool was found to be (Cronbach's Alpha) 0.787.

### Analysis of Data

Data collected through the questionnaire was tabulated, analyzed by Mean, Correlation and Independent Sample t- test by using (SPSS-XII).

## Findings

Following findings were made on the basis of the analyzed data.

### Hypothesis 1

There is no significant relationship between the locus of control scores and academic achievement scores of all female students.

Table1 denotes that, the correlation coefficient between locus of control score and academic achievement scores of all girls is  $r=0.77$ . Where as the table value of correlation is 0.19 at .05 level of significance. So the null hypothesis stating that there is no significant relationship between the locus of control scores and academic achievement scores of all female students is rejected and it is concluded that there is a significant relationship between the variable of locus of control and academic achievement of female students.

### Hypothesis 2

There is no significant relationship between the locus of control scores and academic achievement scores of all male students.

Table 2 exhibits that, the correlation coefficient between locus of control score and academic achievement scores of all male students is  $r=0.66$ . Where as the table value of correlation is 0.19 at .05 level of significance. So the null hypothesis stating that there is no significant relationship between the locus of control scores and academic achievement scores of all male students is rejected and it is concluded that there is a significant relationship between the variable of locus of control and academic achievement of all male students.

Variables	N	r	p
Locus of control and academic achievement	261	0.77	S

Table 1. Showing correlation between locus of control score and academic achievement scores of all female students

Variables	N	r	p
Locus of control and academic achievement	205	0.66	S

Table 2. Showing correlation between locus of control score and academic achievement scores of all male students

### Hypothesis 3

There is no significant relationship between the locus of control scores and academic achievement scores of all male and female students.

Table 3 specifies that, the correlation coefficient between locus of control score and academic achievement scores of all male and female students is  $r=0.72$ . Where as the table value of correlation is 0.19 at .05 level of significance. So the null hypothesis stating that there is no significant relationship between the locus of control scores and academic achievement scores of all male and female students is rejected and it is concluded that there is a significant relationship between the variable of locus of control and academic achievement of all male and female students.

### Hypothesis 4

There is no significant relationship between the locus of control scores and academic achievement scores of male college students.

Table 4 stipulates that, the correlation coefficient between locus of control score and academic achievement scores of all boys is  $r=0.69$ . Where as the table value of correlation is 0.19 at .05 level of significance. So the null hypothesis stating that there is no significant relationship between the locus of control scores and academic achievement scores of all male college students is rejected and it is concluded that, there is a significant relationship between the variable of locus of control and academic achievement of male college students.

Variables	N	r	P
Locus of control Academic achievement	466	0.72	S

**Table 3. Showing relationship between locus of control score and academic achievement scores of all male and female students**

Variables	N	r	p
Locus of control and academic achievement	126	0.69	S

**Table: 4 Showing correlation between locus of control score and academic achievement scores of male college students**

### Hypothesis 5

There is no significant relationship between the locus of control scores and academic achievement scores of female college students.

Table 5 indicates that, the correlation coefficient between locus of control score and academic achievement scores of all girls is 0.80. Where as the table value of correlation is 0.19 at .05 level of significance. So the null hypothesis stating that, there is no significant relationship between the locus of control scores and academic achievement scores of all female college students is rejected and it is concluded that, there is significant relationship between the variable of locus of control and academic achievement of all female college students.

### Hypothesis 6

There is no significant difference between the mean scores on locus of control of male and female college students.

Table 6 reflects that, the obtained t value of 2.35 is more than the table t value of 1.97 at .05 level of significance. So the null hypothesis stating that there is no significant difference between the mean scores on locus of control of male and female college students is rejected and it is concluded that, there is a significant difference between mean locus of control scores of all male and female students in favour of male students.

Variables	N	r	p
Locus of control Academic achievement	163	0.80	S

**Table 5. Showing correlation between locus of control score and academic achievement scores of female college students**

Groups	N	Mean	SD	SED	T	P
Girls	240	11.84	2.86	0.32	2.35	S
Boys	126	12.59	2.54			

df=364

t at .05=1.97

**Table 6. Showing the mean score difference between mean locus of control scores between all male and female students**

Groups	N	Mean	SD	SED	t	P
Girls	21	11.46	4.75	1.12	0.28	NS
Boys	79	12.59	2.54			

df=98

t at .05=1.97

**Table 7. Showing the mean score difference between mean locus of control scores between all male and female university students**

## Hypothesis 7

There is no significant difference between the mean scores on locus of control of male and female university students.

Table 7 designates that, the obtained t value of 0.28 is less than the table t value of 1.97 at .05 level of significance. So the null hypothesis stating that there is no significant difference between the mean scores on locus of control of male and female college students is accepted and it is concluded that there is a difference in favour of male university students but that difference is not statistically significant.

## Hypothesis 8

There is no significant difference between the mean scores on locus of control of female college and university students.

Table 8 specifies that, the obtained t value of 1.04 is less than the table value of t 1.98 at .05 level of significance. So the null hypothesis stating that there is no significant difference between the mean scores on locus of control of female students of college and university is accepted and it is concluded that there is a difference in favour of female college students but that difference is not statistically significant.

## Hypothesis 9

There is no significant difference between the mean scores on locus of control of male college and university students.

Groups	N	Mean	SD	SED	T	P
Female Colleges	240	11.84	2.86	0.67	1.04	Ns
Female university	21	11.14	3.87			

df=259 t at .05=1.98

Table 8. Showing the mean score difference between mean locus of control scores between female college and university students

Groups	N	Mean	SD	SED	T	P
Male university	126	12.59	2.54	0.50	2.26	S
Male college	79	11.46	4.75			

df=203 t at .05=1.97

Table 9. Showing the mean score difference between mean locus of control scores between male college and university students

Table 9 specifies that, the obtained t-value of 2.26 is more than the table t value of 1.97 at .05 level of significance. So the null hypothesis stating that there is no significant difference between the mean scores on locus of control of male college and university students is rejected and it is concluded that there is a significant difference between mean locus of control scores of male college and university students in favour of male university students.

## Hypothesis 10

There is no significant difference between the mean scores on locus of control of all and male and female students.

Table 10 indicates that, the obtained t-value of 3.82 is greater than the table t-value of 1.98 at .05 level of significance. So the null hypothesis stating that, there is no significant difference between the mean scores on locus of control of all male and female students is rejected and it is concluded that, there is a significant difference between mean locus of control scores of all male and female students in favour of male students.

## Discussion

- There are many factors that affect students' achievement or that are correlated with students' achievement. The results show that, there is a significant relationship between locus of control and academic achievement of female students. Results also reject null hypothesis formulated for the study. It can be said that locus of control directly affects the students' achievement or has been association with students' academic achievement. They get motivation from this control, either positive or negative, for their studies and that effect is given in the results of this study (Table 1).

- Regarding the effects of locus of control on students' achievement, even there is no difference of gender. Results show that locus of control also has a significant relationship with the academic achievement of male

Groups	N	Mean	SD	SED	T	P
Girls	261	11.37	3.04	0.32	3.82	S
Boys	205	12.09	2.82			

df=464 t at .05=1.98

Table 10. Showing the mean score difference between mean locus of control scores between male college and university students

students and also there is a significant relationship between the two in the results of female students as shown in Table 1. It seems that if students have the ability of locus of control, they can change the direction of their achievement. And the results can be according to their desires. It can also be observed that there should be a positive association between the students' locus of control and their achievement (Table 2).

- It is also indicative by Table 3 that, both types of students (male and female) have the same ability of locus of control. And this ability or its related factors affect their academic achievement as well. There is a significant relationship between locus of control and academic achievement of the students. Hence the results reject the null hypothesis. It is also shown that, locus of control is a type of motivation for the students for their studies.

- Male college students are considered more careless than female students. But, motivation is a factor that affects all types of students' achievement. Locus of control is a source of motivation for the students. Results of the study show that, both male and female students have the ability to control their concepts and actions as well. And they are motivated afterwards as well. Because there is a significant relationship between locus of control and academic achievement of both male and female students in this study (Table 4&5).

- There was a null hypothesis in this study that, there is no significant difference between the mean score of male and female college students regarding locus of control and their academic achievement. But this hypothesis was rejected by this research because, results show that there is a significant difference between the mean scores of male and female students regarding their academic achievement and their locus of control. The male students are having significantly greater scores than the female students. It can be shown that male students have locus of control ability more than female students. They are better in their actions or control over their studies as compared to female students (Table 6).

- Regarding the academic achievement of male and female university students and their ability to control their

actions, the results show that all University students, either male or female, are having the ability to improve their academic achievement with the help of motivation or other related factors. But, male university students are more active and able to do so. Because they have greater ability of locus of control as compared to female students. But the difference is not very much significant, which is also a positive sign towards female students. It can be shown that female students are weak as compared to male students in that ability (Table 7).

- Learning is the result of many factors. In other words, it can be given that there are many factors that affect students' learning or many factors which are having association with students' learning. Level of education is one of them. Students at college level are considered as careless regarding their studies. But the results indicate that female college students are having more locus of control than university students. But the difference is not statistically significant. It means the University female students are also having the characteristic but not more than college students according to the results. The null hypothesis of this research which is "There is no significant difference between the mean scores on locus of control of female college and university students", is rejected. There is a difference between both types of students but not significant (Table 8).

- On the other hand, if college and university boys are compared regarding their locus of control, the mean score of university boys is greater than college male students. That score is not only greater but significantly greater. It can be said that, at university level male students are more serious towards their studies as compared to male students at college level. University level also shows the maturity of the students. And so null hypothesis of this study which is "There is no significant difference between the mean scores on locus of control of male college and university students", is rejected. Male students are having the ability to control their actions or reactions, either positively or negatively, at University level. And it will also be a source of motivation for them (Table 9).

- There was a null hypothesis in this research which is "There is no significant difference between the mean

scores on locus of control of all and male and female students". It can be seen from the results of the study that, this hypothesis is rejected because according to the results, there is a significant difference between the locus of control score of all male and female students. And the results go towards male students. Mean score of male students is not only greater, but also significantly greater than female students regarding their ability to having control over their actions or reactions related their studies, which shows that, the male students are better than female students. Female students seem to be better but male students are having the abilities more than female regarding their locus of control scores (Table 10).

## Conclusions

- First hypothesis of this study is rejected. The study resulting that, there is a significant relationship between locus of control and academic achievement of female students.
- Second hypothesis of this study is rejected, and concluded that, there is a significant relationship between the locus of control and academic achievement of male students as well.
- Third hypothesis of this study is rejected and concluded that, there is a significant relationship between the locus of control scores and academic achievement scores of all male and female students.
- Fourth hypothesis of this study is also rejected, the study resulting that, there is a significant relationship between the locus of control scores and academic achievement scores of male college students.
- Fifth hypothesis of this study: There is no significant relationship between the locus of control scores and academic achievement scores of female college students is rejected and concluded that There is a significant relationship between the locus of control scores and academic achievement scores of female college students.
- Sixth hypothesis of this study is rejected and concluded that, there is a significant difference between the mean scores on locus of control of male and female college students.

- Seventh hypothesis of this study is rejected and further concluded that, there is a difference between the mean scores on locus of control of male and female university students, in favor of male students but they are not significantly better.
- Eighth hypothesis of this study was there is no significant difference between the mean scores on locus of control of female college and university students. According to the results, female college students are better. So, the null hypothesis was rejected.
- Ninth hypothesis of this study was that there is no significant difference between the mean scores on locus of control of male college and university students. Male university students are significantly better. That's why null hypothesis was rejected.
- Tenth hypothesis of this study was that there is no significant difference between the mean scores on locus of control of all male and female students. Male students are having significantly greater scores than female. So the null hypothesis was rejected.

## Recommendations

- Teaching at higher education stage appears to influence the students' locus of control. It is therefore recommended that, teachers of higher education, both at college and university level should adopt the following.
- Provide experiences of successful learning to the students.
- Classroom inquiry should be used as a method of teaching so that students can discover knowledge through personal efforts.
- Use a variety of evaluation methods in addition to teacher evaluation such as Self- evaluation and Group evaluation. It will also help in making the students self-regulated.
- Parents should encourage their daughters. They should accept and appreciate the performance and achievements of their daughters in every field.
- Teachers should develop strong interpersonal relations with female students to keep them ahead in education. They should involve them in classroom



activities more and more in order to develop their self-confidence. They should organize their teaching styles in a way that all the students especially female students remain interested in their study goals.

Further studies on locus of control and its relation to such variables such as age, gender, family size, birth order, socio-economic status etc are to be carried out.

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