

Academic Locus of Control of High and Low Achieving Students

*₁ Syeda Salma Hasan, *₂ Ruhi Khalid
Email: s.salmahasan@hotmail.com

The study investigated the academic locus of control of high and low achieving undergraduate students. It also explored the gender differences in terms of academic locus of control and the relationship between academic locus of control and academic achievement. Sample of the study consisted of 187 (126 high and 61 low) achieving BSc final year students. Independent group research design and purposive sampling technique was used in this study. Academic locus of control scale developed by Trice (1985) was administered. The scale classifies the students having scores from 0-14 as internals and with the score above than 14 as externals. Two –Factor ANOVA, correlation and simple linear regression was used to analyze the data. Results indicated a significant main effect of achiever and gender and no interaction between gender and achiever was found. High achieving students scored low on academic locus of control which indicates their strong internal academic orientation than low achieving students. Interestingly study indicated that high as well as low achieving students both hold an internal academic belief system towards the academic situations. Women are significantly high on an internal academic locus of control indicating less internal academic orientation than men. Results also indicated a significant inverse relationship between academic locus of control and GPA and simple linear regression indicated that academic locus of control is a predictor of GPA. The study has wide implications for the psychologists, educationists, teachers and students.

Keywords: *Academic achievers, internal academic locus of control, external academic locus of control and gender. Second Language (L2).*

*₁ Syeda Salma Hasan (*Assistant Professor, Department of Psychology, GC University Lahore*)

*₂ Ruhi Khalid (*Director Institute of Psychology, Beacon House National University Lahore*)

Introduction

An academic locus of control is an important variable which affects the students' academic endeavors. The influence of locus of control on academic achievement captured the attention of many psychologists' decades ago and since then this concept has been extensively investigated in relation to academic achievement. It has been observed that students do causal analysis of their academic outcomes. They attribute their academic outcomes to internal factors such as intelligence, hard work and ability and to external factors such as luck, rules of examination system and biased marking etc. Students with an internal academic belief system excel in academics than the students with the external academic belief system (Miller & Irving, 1995).

An academic locus of control manifests

students' beliefs regarding their control over the academic situations. A student with an internal academic locus of control believes that success or failure is not beyond his control for instance, this student would believe that grades are the outcome of his effort whereas a student with an external academic locus of control believes that success or failure is controlled by external forces beyond his control and may believe that grades do not reflect effort and are effected by external factors such as luck, examination system, biased attitude of teacher etc., Students with an internal academic locus of control believe that grades reflect one's effort, attending classes is important, studying regularly is important and they do not think that teachers give free rides to some students. On the other hand students with an external academic belief system believe that professors give free rides to students, attending classes are not worth paying and feel

helpless over academic situations. We can say that students with an internal academic locus of control are the captains of their academic destinies whereas the students with an external academic locus of control are at the mercy of external forces (Trice, 1985).

The dichotomy of internal/external locus of control was initially presented by Rotter (1966) which states that an individual with an internal locus of control feels control over the happenings in his life whereas an individual with an external locus of control feels that whatever is happening in his life is beyond his control. Rotter explained the how the expectancy of a certain behavior develops. He explained that if a student believes studying the whole night before exam can bring A+ and if it really happens then a student develops an expectancy studying whole night causes good grades but on the other hand if studying whole night before exam does not result in A grade then a student will have a low expectancy that studying whole night results in A grade. The Rotter's dichotomy of internal vs external locus of control is closely related with Richard DeCharms (1968) theory of personal causation concept of pawn and origin. A student with an internal academic locus of control feels like a "origin" believes in his ability and feels capable of his personal development whereas a student with an external academic locus of control feels like a "pawn" on the chess board pushed around by luck, teachers, and significant others (Arkes & Garske, 1982). Ryan and Grolnick (1986) studies have indicated that when students feel more like origins and less like pawns they have high self-esteem. These students feel more competent and feel that they are in charge of their academic learning. They also score higher on standardized tests and are less absent from school.

Students having an internal locus of control are more likely to pursue academic activities than the students with an external locus of control (Lefcourt, 1976). Similarly, Uguak, Elias, Uli, and Suandi (2007) study reported that 96% students make internal attributions of their success. Studies have shown that college students who attribute their academic outcome to external factors are defensive externals, as external beliefs evade their personal responsibility for failure (Bas gall &

Synder, 1983).

Many previous studies have indicated the impact of locus of control on academic achievement. Lefcourt (1976) Schunk (1990) Shell, Colvin and Bruning (1995) have shown that students with the same intelligence level differ in their academic achievement mainly due to differences in their internal academic orientations. Students with high internal locus of control achieve good grades as compared to students who are low on internal locus of control. Ugurogolo and Walberg (1979) reported that children who take more responsibility of their academics are more likely to perform better. The quantitative reviews have indicated that more the internal orientation the higher is the academic achievement (Findley & Cooper, 1983, Bartal & Bar Zohar, 1977). Recent studies also support that students high on internal locus of control academically achieve higher than externals (Yazdanpanah, Shragrad & Rahimi, 2010). Many studies have been carried out in the past which indicate locus of control as an important determinant of academic achievement. Gurin and Gurin, Lao and Beattie (1969) and Lao (1970) reported that personal sense of control predict school grades and internal and external scores are related to achievement strivings. Stipek (1980) reported that students locus of control had more impact on academic performance than vice versa. Mooney, Sherman and Presto (1991) study reported that academic locus of control was the strongest predictor of college adjustments. Similarly Valenteine, Dubois and Cooper (2004) showed that positive self beliefs predict academic achievement.

Studies also highlight the relation between locus of control and emotional experiences. Phares (1976) found that an internal belief system produces sense of pride following success and it also cause variety of negative emotions after failure. The external belief system denies emotional experience and therefore provides little basis for the pursuit of excellence. If one ascribes success to outside forces then how can one take pleasure in the attainment of success or make further efforts to achieve it.

Contemporary work in this area greatly acknowledged the Weiner (1994) theory of attribution which describes the causal analysis of

students' successes and failures to three causal dimensions locus, stability and controllability. Locus i-e the location of cause or outcome which can be internal such as hard work, intelligence or external such as luck, examination system , stability i-e whether the cause of an outcome is stable such as ability or is changeable for instance effort and controllability i-e whether the cause of an outcome is controllable for example effort, hard work or uncontrollable such as luck etc., Weiner believes that when success is ascribed to internal factors it produces pride whereas when failure is ascribed to internal factors such as lack of ability it diminishes self-esteem. If success is attributed to stable internal factors such as ability it increases the likelihood of success in future whereas attributing it to unstable factors such as luck it does not predict success in future. Similarly, if a student attributes his success at a task to a controllable cause for instance, putting forth his best efforts he experience pride but when he fails at a task which is controllable he experiences shame and guilt for not making effort. Failing at an uncontrollable task such as having a low aptitude may produce anger whereas succeeding at an uncontrollable task makes the student feel grateful and lucky. Kivilu and Rogers(1997) support the Weiner's views that attributing success to ability and effort enhances one's sense of pride and attributing success externally decreases sense of pride. Attributing failure internally causes shame and it reduces the feelings of shame if failure is attributed externally.

Previous literature regarding locus of control of high and low achievers shows that high achievers have an internal locus of control whereas low achievers have an external locus of control about their academic outcomes. Low achieving students have an external locus of control and they exhibit maladaptive attribution. High achievers attribute success internally and feel pride in their accomplishments whereas low achievers attribute success externally thereby not experiencing much personal pride. High achievers believe that success is contingent on their own characteristics whereas low achievers believe that success is contingent on external forces like luck, easy task etc., (Arkes & Garske, 1982).

Kukla (1972) reported that undergraduate high

achieving students attributed their success or failure on a digit guessing task more frequently to the degree of effort expended than the intermediate or low achieving students. Kukla's findings suggest that male undergraduate high achievers attribute their success and failure to an internal controllable factor and they believe that by putting in their best efforts they can overcome their failures. Mee, Steve, Janna and Karla (1994) study indicated that high achievers attribute success more to ability than did the low achievers and low achievers are more likely to ascribe their success on reading task to external factors than the high achievers. Park and Kim (1998) reported that honor students who won scholarships had an internal locus of control as compared to students on academic probation. Similarly, Lebedina and Manzoni (2004) investigated the factors to which students attribute success and lack of success. Students considered giving up, in adequate learning and laziness as the major factors for being unsuccessful in studies. Majority of successful students attributed success and lack of success to the personal characteristics of a student whereas unsuccessful students believed more in circumstances which were beyond control.

On the other hand, few studies have shown no differences in the locus of control of high and low achieving students. Ling Lau and Chan (2001) reported that underachievers have a weak academic selfconcept, use ineffective study techniques but they do not exhibit maladaptive attribution patterns as indicated by the western studies. Similarly Sharma (1986) measured the locus of control of high and low achievers. Results showed internality as the locus of control among low and high achieving males and females.

Many researchers have addressed the issue of gender differences in terms of academic locus of control. Dweck and Reppucci (1973) reported that males are more likely to attribute failure to lack of effort or bad luck whereas young girls attribute failure to low ability. Dweck and Goetz (1978) study explained that why do girls make more internal attributions for failure than boys. They found that boys receive more negative feedback from their teachers but this has nothing to do with their intellectual adequacy. On the other hand, negative feedbacks that girls more frequently

receive are related to intellectual aspects of work. That is why girls have more internal attributions for failure more often than boys. Stipek and Hoffman (1980) suggested that high achieving girls understate their future academic achievement because of higher anxiety and need for adult approval. Strickland and Haley (1980) found that females are more likely to respond in an external direction on the item related with the academic achievement as compared to males. These findings are consistent with Dweck, Goetz and Strauss (1980) asserted that girls are more likely than boys to blame lack of ability whereas boys are more likely to blame motivational or external factors such as lack of effort or the evaluation criterion for failure. A recent study by Zaidi and Mohsin (2013) also reported that male students have an internal locus of control whereas female students have an external locus of control.

Keeping in view the previous literature we can say that high achieving students have an internal academic belief system and low achieving students are defensive externals and therefore attribute their poor performance to external factors such as to difficult exams in order to protect their fragile self-esteem. Studies regarding gender differences indicated that girls have low internal orientation. This may be because girls' sense of control is affected by their sensitive nature and dominant role of significant others in their lives.

A lot of work has been done with reference of locus of control of students in the west but still research work is required to be done with reference to our Pakistani students' belief system regarding the academic situations. There is a need to investigate which academic attribution style internal or external prevails in our Pakistani educational system. An attribution style of students also affects their motivational aspects of learning. Nowadays it has been observed that students attribute their performance to their efforts, interests and intelligence and on the other hand it is a true reality they do hold teachers biased attitude and relative marking system responsible for the low performance. This research would help to uncover their locus of academic orientations. In the light of the literature on this subject it was hypothesized that high academic achievers would be higher on an internal academic locus of control than the low

academic achievers. Secondly, there will be gender differences in terms of academic locus of control. Lastly there will be a significant correlation between academic locus of control and academic achievement .

Method

Sample consisted of 187 BSc final year students with a distribution of 126 high achievers and 61 low achievers. The age range of high and low achievers was 18-21 years with a mean age of 20 years. The GPA of the high achievers group ranged from 3.2 -3.7 with a mean GPA of 3.4. The GPA of low achievers group ranged from 1.40-2.2 with a mean GPA of 1.82.

Instrument

Trice academic locus of control scale: was used to measure the internal and external academic locus of control of high and low academic achievers. This scale measures the locus of control regarding academic settings. It consists of 28 items. Responses are elicited on two- point scale true or false. The range of scores is 0-28. The scores are significantly correlated with grade point average. Low scores on the scale are associated with higher GPA and high scores are associated with lower GPA. Scores from 0-14 obtained on the scale indicate internal locus of control and scores above this range indicate external locus of control. Some of the items given are "College grades most often reflect the effort you put into classes" "Professors sometimes make an early impression of you and then no matter what you do, you cannot change that impression" "Studying everyday is important" "For some courses it is not important to go to class" "I plan well and stick to my plans." Responses given in external direction are scored. Administration and scoring of the scale takes not more than 20 minutes. The test- retest reliability for students was .90 and kuder Richardson internal consistency was .50 (Trice, 1985). The alpha reliability co-efficient on our sample was .60.

Procedure

Sample was drawn from the high and low achieving men and women of B.Sc final year students from an educational institution. Students of B.Sc final year students were classified as high

and low academic achievers on the basis of the GPA obtained in their previous annual examinations. High achievers were those students who were one standard deviation above the mean with reference to their normative group whereas low achievers were those students who were one standard deviation below the mean with reference to their normative group. The mean GPA value of the normative group was 2.7. All the high achievers had a GPA of 3.2 and above and all the low achievers had a GPA of 2.2 and below. All the low achievers passed their previous examination on margin and were failed in two subjects. Data was collected from three successive academic sessions. The independent group research design was followed in this study as the two groups -high and low achieving men and women differed significantly in their academic achievement level.

Purposive sampling technique was used as the data was drawn from one educational institution keeping in view the convenience of the researcher and to avoid variability in the criterion of evaluation. Criterion sample was drawn. Students meeting the criteria of high and low achievers were included only in the sample. Trice academic locus of control questionnaire was administered to them. Participants were asked to respond honestly. After the collection of data scoring was done according to the key. The respondents cooperated well in the study.

Results

Two-way Analysis of variance was applied to compare high and low achieving men and women in terms of academic locus of control.

Table 1: Descriptive Statistics of high and low achieving men and women on academic locus of control scale.

Academic achievers	Gender	<i>n</i>	<i>M</i>	<i>SD</i>
High Achievers	Men	45	10.00	3.38
	Women	81	11.84	3.67
	Total	126	11.18	3.66
Low achievers	Men	44	12.14	4.10
	Women	17	13.24	3.03
	Total	61	12.44	3.84
Total	Men	89	11.06	3.88
	Women	98	12.08	3.59
	Total	187	11.59	3.76

Table 2: Two -way ANOVA for high and low achieving men and women on academic locus of control.

Source of Variation	<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>
Achiever	107.44	1	107.44	8.02**
Gender	74.36	1	74.36	5.55*
Achiever X Gender	4.72	1	4.72	.35 ^{ns}
Error	2451.15	183	13.39	

p<.01,*p*<.05,*ns*=not significant

Table 3: Relationship between GPA and Academic locus of control n=187

Academic locus of control	
GPA	-.17*
*p<.05	

Table 4: Summary of Simple Linear Regression Analysis indicating Academic locus of control(ALOC) as a predictor of GPA.

Predictor	B	SE	β	sig
Academic locus of control	-.881	.372	-.171	.02*

$R^2 = .03$ * $p < .05$

Note: A significant inverse relationship indicates higher the GPA the lower would be the academic locus of control which means internal academic locus of control and lower the GPA the higher would be the academic locus of control which means external academic locus of control.

Note : negative value of β means that an increase in ALOC i-e moving in direction of externality will cause decrease in GPA and any decrease in ALOC i-e internal orientation will increase the GPA.

The two-way analysis of variance indicated a significant main effect of achiever $F(1, 183) = 8.02$, $p < .001$. Mean values of academic locus of control scores indicated that high achievers ($M = 11.18$, $SD = 3.66$) are significantly low on academic locus of control as compared to low achievers ($M = 12.44$, $SD = 3.84$). This means that high achieving students are significantly high on internal academic orientation as compared to low achieving students. A

significant main effect of gender $F(1, 183) = 5.55$, $p < .05$ was also found. Mean values showed that men ($M = 11.06$, $SD = 3.88$) are significantly low on academic locus of control orientation as compared to women ($M = 12.08$, $SD = 3.59$). This means that men are high on internal academic orientation than women. However, no interaction between achievers and gender was found.

Figure 1 shows that high achieving students are low on internal academic locus of control which means they have more internal academic orientation than low achieving students.

Figure 2 shows that men are significantly low on internal academic locus of control which means they have strong internal academic orientation than women.

Figure 3 shows the two parallel lines which indicates no significant interaction between gender and academic achievers.

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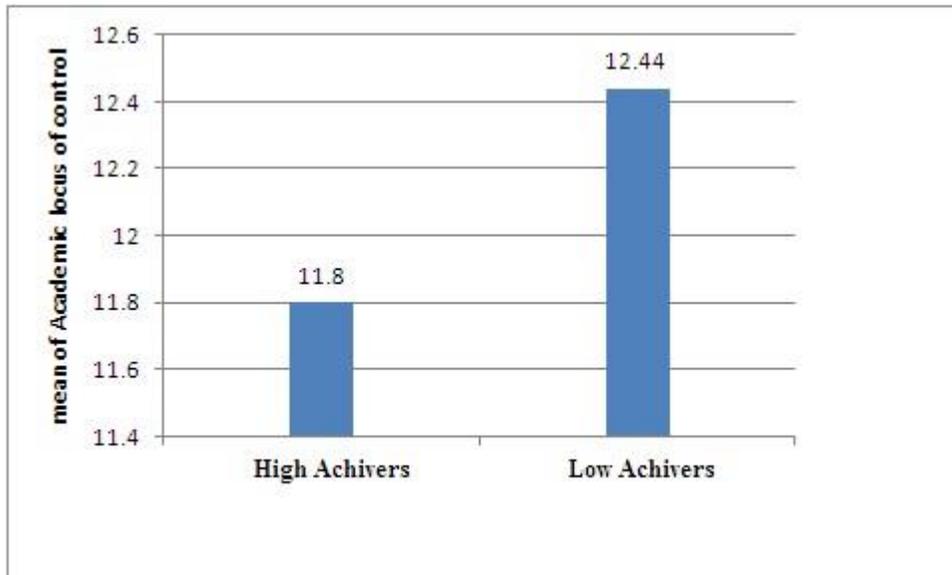


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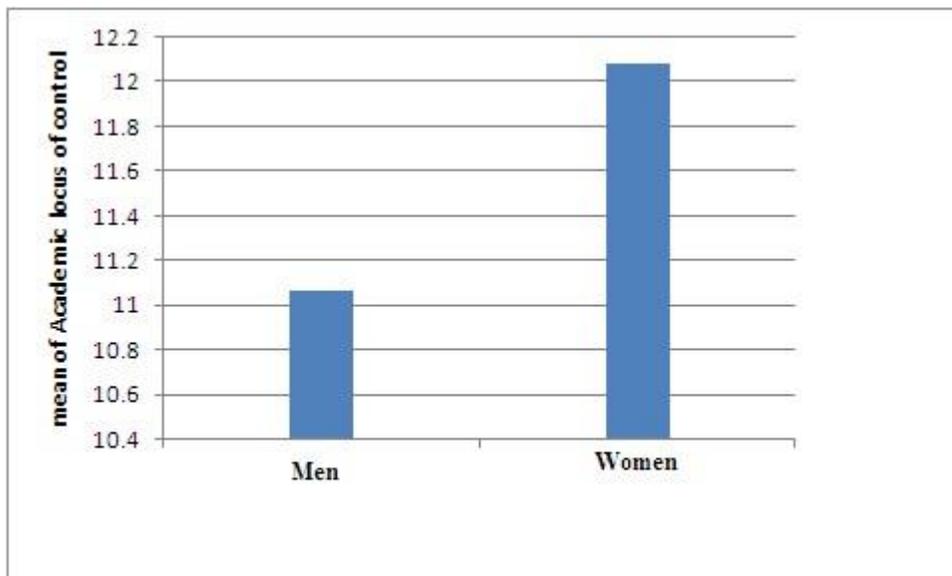
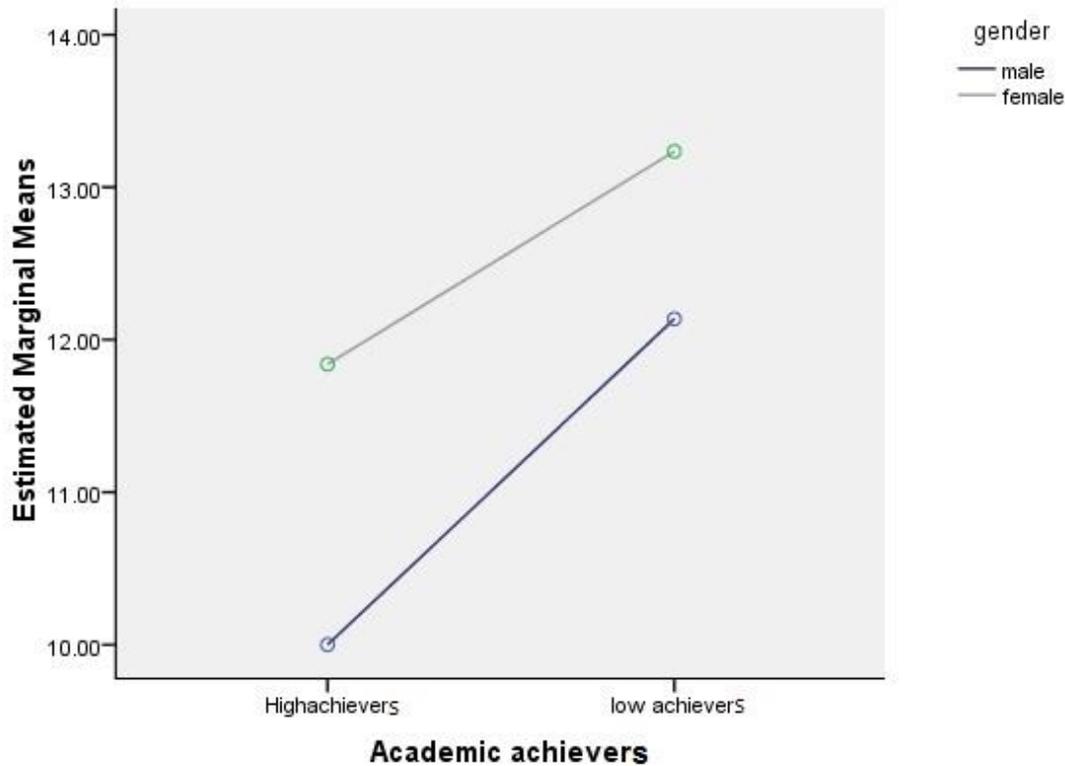


Figure 3 shows the two parallel lines which indicates no significant interaction between gender and academic achievers.

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Discussion

The findings showed significant differences in the academic locus of control of high and low academic achievers. High achievers have significantly higher internal academic orientation towards academic situations as compared to low achievers. The cutoff score point is 14 on the scale and score above this value indicates an external orientation towards academic situations. Although the high and low achievers differ significantly on an academic locus of control but the means of both groups indicate that high and low achieving students have an internal academic locus of

orientation towards academic situations.

The results showed that both high and low academic achievers have an internal academic locus of control towards the academic situations. We can assume that both high and low achievers believe that effort, hard work, regular study schedules, doing college work on time, being hopeful about future affects the academic outcomes positively and believe in their ability and are hopeful about improving their future academic performances. On the basis of our findings we can say that high as well as low achieving students

have an internal belief system regarding academic behaviors and they do not believe that studying is not important, teachers make an early impression of the students and give free rides to students and taught courses are worthless etc.

On the basis of our findings we can say that high and low achieving hold themselves responsible and not the external forces for the diverse academic situations. The findings contradict with the extensive literature which reports that low achievers are high on external locus of control and they act as defensive externals by attributing their low performances to biased attitude of the teacher, luck, out of course text in question paper to evade the personal responsibility for their failures (Basgall & Synder, 1988).

The findings showed that low achievers despite of having an internal academic locus of control are achieving low grades. The findings strongly support the Rotter's (1975) elaboration of the concept of locus of control that by only expecting a particular behavior will bring a particular reinforcement will not cause the occurrence of that behavior. The value of the expected reinforcement is also important. Keeping in view the findings of our study we can say that low achieving students know that higher grade is contingent on studying but they do not study means that they do not value the high grades. From the findings of our study it can be concluded that by only having an internal academic locus of control regarding academic outcomes will not produce high academic performance unless planned study, hard work and efforts are actually been done to strive in academic settings.

The findings of the study strongly support the study by Ling, Lau and Chan (2001) reported that underachievers have a weak academic self-concept, use ineffective study techniques but they do not exhibit maladaptive attribution patterns as indicated by the western studies. The findings are also in line with the Sharma (1986) who reported internality as the locus of control of high and low achievers.

The findings also support Shell, Colvin and Bruning (1995) that students with better grades also

score high on the internal locus of control as compared to students with the same level of intelligence who are low on internal locus of control. It also supports Park and Kim (1998) that academically high achieving students are higher on internal locus of control and low on external locus of control.

The findings of this study also enable us to think about the Weiner (1972) and Kukla (1970) description of the attribution styles of high and low resultant achievers. High achievers attribute success to ability and effort and attribute failure to lack of effort whereas low achievers attribute success to unstable factors such as task difficulty and luck and failure to stable factors such as lack of ability. Low achievers attribution of failure to an internal stable factor lack of ability results in low expectations for future success. Believing that they lack ability will produce low future expectations. Internal attributions about failure evoke more intense emotional reactions. This study did not investigate that to what factors high and low achievers attribute their success and failures. It can be assumed that one of the factors for having an internal orientation may be that low achievers attribute failure or low performance to internal stable factors such as lack of ability which promote the belief that they will experience lack of success in future situations whereas high achievers attribute failure to unstable internal factor such as lack of effort and they strongly believe that by making effort they can succeed in situations in which they have experienced lack of success.

It also strongly supports the Phares (1976) belief that an internal belief system leads to reactions of pride following success and to a variety of negative emotional experiences after failure. The affective responses are greatest for individuals who take personal responsibility for success and failure. This study does not address the affective reactions of high and low achieving students but this could affect their practical approach towards academic learning. On the basis of our findings we can say may be low academic achievers feel helpless about improving their academic profile and their constant low profile do not let them to develop success expectancy about future academic situations.

The findings have clearly indicated that the low achievers are not defensive externals. The findings emphasize that by only having an internal orientation towards the academic outcomes will not produce positive academic results. This belief demands a practical action. It also emphasizes the factors other than academic locus of control such as poor study orientation, low motivation, and emotional problems responsible for poor performance of low achievers. However, the findings of the study support the extensive literature that high achievers are high on internal locus of control as compared to low achievers.

Interestingly, results have also indicated significant gender differences in terms of internal academic orientation. Male students scored significantly higher on internal academic locus of control than female students. On the basis of our findings we can say that male students perceive more control over academic situations than female students. Although male and female students differ significantly on an internal academic locus of control but both have an internal academic belief system as the mean values obtained on the scale by men and women are less than 14 which means internal academic orientation. The findings do not support Strickland and Haley (1980) study which reported that females are more likely to respond in the external direction on the item related with the academic achievement as compared to males. Similarly our findings contradict with Zaidi and Mohsin (2013) that boys have an internal and girls have an external locus of control. The findings indicate that both high achieving men and women perceive control over the academic outcomes and attribute them to internal factors such as hard work, ability. They perceive sense of control in selection of career goals.

The correlation analysis indicated a significant inverse correlation between GPA and academic locus of control. This means higher the GPA the lower would be the academic locus of control which means more internal academic orientation and lower the GPA the higher would be the external academic orientation. The correlation findings support the previous extensive literature which reports that more the internal academic orientation the higher would be the academic

achievement (Bartal & BarZohar ,1977,Findley &Cooper,1983). The regression analysis have indicated academic locus of control as a predictor of GPA. The regression analysis also shows that decline in an academic locus of control i-e internal academic orientation predicts higher academic achievement and the findings of the study support the previous studies which highlights that internal academic orientation predicts grades(Gurin and Gurin, Lao & Beattie 1969,Lao 1970, Mooney, Sherman and Presto 1991, Valentine, Dubois and Cooper, 2004)

Conclusions

We conclude that high and low academic achievers and male and female students differ significantly in terms of an internal academic locus of control. High achieving students and male students have more strong internal academic belief systems. This study enables us to conclude that our students whether high or low achievers take responsibility of their academic achievements and they do not attribute their good and bad academic achievements to luck, favoritism, examination system etc. Secondly it shows that male and female students have an internal academic locus of control towards academic situations. Thirdly that internal academic locus of control is related with higher GPA and academic locus of control is a predictor of GPA.

Implications

The study has wide implications for educationists; teachers and students as it reveals that in Pakistani educational culture students irrespective of their academic achievement take responsibility of their academic behaviors. This study suggests that future studies can be carried out how the academic locus of control is influenced by the teaching style of a teacher. The study would help the students understand attribution analysis of their academic behaviors in terms of internal and external factors. This study would help many teachers at both secondary and tertiary level to locate their students' preferred approaches to academic work and improve the quality of teaching in a more dialogical learning environment. The teachers can encourage the students to make internal attributions for their successes which in turn would enhance their academic competency.

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