

Impact of Locus of Control on Leadership Qualities : An Empirical Study of Business Management Students

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Abstract

The paper aims to study the Locus of Control of students pursuing Business Management Course and impact of Locus of Control on Leadership Qualities of the students. The results indicate that more number of students have external Locus of Control. The external Locus of Control is higher for Powerful Others as compared to Chance Control. The external Locus of Control is in medium range hence it indicates that the students are not overtly controlled by external factors. The regression analysis shows that Locus of Control has an impact on Leadership qualities of a student.

Keywords: Locus of Control, Development, Human Resource Development, Self Assessment, Business Management Students

Introduction

Locus of control is a psychological, social learning theory that refers to the extent to which individuals perceive control over their lives, and the environment (Lefcourt, 1976). Studies reveal that an individual's perception of control is related to leadership style (Adeyemi-Bello, 2001; Fusilier, Ganster & Mayes, 1987; Govindarajan, 1989; Hollenbeck, Brief, Whitener & Pauli, 1988; Mia, 1987; Storms & Spector, 1989). Research undertaken in the Western world is brimful with claims that internality (a psychological belief system of one having control over aspects of one's life and the environment) is a trait which is in common amongst successful leaders (Klein & Wasserstein-Warnet, 1999; Andrisani & Nestel, 1976; Fusilier, Ganster & Mayes, 1987; Govindarajan, 1989; Hollenbeck, Brief, Whitener & Pauli, 1988; Mia 1987). However, April, Macdonald and Vriesendorp (2000: 1) state that "the illusion of control is killing us". In reference to leadership in the 21st century, April, Macdonald and Vriesendorp (2000), and Obeng (1994), claim that the perception that our environment can be regarded as predictable, consistent and forever under control is entirely incorrect. Beck and Cowan (1996) state that the worldview (Dundes, 1971; Hannah & Zatzick, 2008), value systems (Allport, Vernon & Lindzey, 1960; Spranger, 1922), levels of psychological existence (Ryan & Deci, 2000), belief structures (Walsh, 1988), organizing principles, and thinking modes (Zhang, 2002), all transform with progress. Our world today is regarded to be a more fragile, dangerous and complex place than it has ever been (Porter, Schwab & Cornelius, 2003). This entails that leadership traits that allow for a high level for planning and control over the future may not be ideal for the 21st century. Instead, traits such as an acute ability to handle ambiguity and uncertainty, to comfortably hold multiple mental constructs, and flexibility to adapt to change, may be more important than ever before.

However, does this mean that a long studied psychological trait of leaders having an internal locus of control expectancy (Klein & Wasserstein-Warnet, 1999) is rendered ineffective? Locus of control, after its introduction by Rotter in 1966, was regarded as the most popular variable in psychology in the coming 20 years (Lefcourt, 1976; Joe, 1971) and internality has been deeply rooted in the concept of individualism and autonomy (Marks, 1998; Torun & April, 2006). Is our world changing so that individuality and autonomy are not the ideal characteristics for success

anymore? The research explores the psychological factor of locus of control of the Business Management Students. The results would be used to create self awareness amongst the students and guiding students for desired changes in their outlook and helping them attain greater internal Locus of Control. Greater Internal Locus of Control in Business Management students would be instrumental in creating better and effective managers and leaders for tomorrow in face of the dynamically changing business environment.

Literature Review

Locus of Control

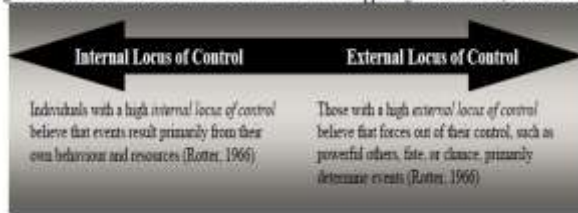
Rotter (1966), who developed the construct of 'locus of control', used the empirical law of effect which states that people are inherently motivated to seek positive stimulation, or reinforcement, and avoid unpleasant stimulation. Rotter (1966) used Ferster and Skinner's (1957) concept of reinforcement, which stated that if the outcomes of responses by an individual are favourable or unfavourable, then the likelihood of the operant to use the response in the future is increased or decreased respectively – this is positive and negative reinforcement. A reinforcement experienced by an individual acts directly to strengthen anticipation that a particular behaviour, or event, will be followed by that same or similar reinforcement in the future (Rotter, 1966). This anticipation of future reinforcements is regarded as expectancy. The person learns to discriminate behaviours and outcomes, and generalises these anticipations of reinforcements for the future. The generalisation of expectancies for controlling reinforcements defines and formulates one's locus of control (Rotter, Seeman & Liverant, 1962). On this basis, Lefcourt (1976) generated a predictive formula, where he defined behaviour potential (the likelihood of engaging in a particular behaviour) as a function of expectancy (the probability that a given behaviour will lead to a particular outcome) and reinforcements (outcomes of our behaviour).

A belief of individuals about controllability over what happens to them in life is a core element of their understanding of how they live in the world (Shapiro, Schwartz & Austin 1996). Locus of control is a personality construct that reflects one's belief or perception about who controls life and the environment (Lefcourt, 1976). The belief can exist in varying levels, reflecting the degree to which one perceives personal control in life (Connolly, 1980). Locus of control has been described as a dimension with two opposing differentiates (Lee-Kelley, 2006). The dimensions reflect the extent to which individuals believe that what happens to them is within their control, or beyond it (Carrim, Basson & Coetzee, 2007). This presents a continuum of internal-external belief system (Littunen & Storhammar, 2000) as shown in Figure 1. A mix of the two belief systems is regarded as balanced locus of control expectancy, also known as shared responsibility or bi-local expectancy (Wong & Sproule, 1984; Torun & April,

2006). Figure 1: Locus of control shown as a continuum with two opposing differentiates (Rotter, 1966) People with an internal locus of control believe that the outcomes of their actions are a result of their own personal efforts (Andrisani & Nestel, 1976), abilities (Carrim, Basson & Coetzee, 2007), or permanent characteristics (Littunen & Storhammar, 2000). They believe that hard work and personal abilities lead to positive outcomes (Carrim, Basson & Coetzee, 2007). Thus, these individuals interpret reinforcements they receive from their surroundings as contingent upon their own actions (Lee-Kelley, 2006). For internals, key links exist between behaviour and its consequences, and the relationship between outcome and personal effort (Connolly, 1980). This belief entails that they are 'masters of their fates' (Bonne, Olfen & Witteloostuijn, 2005). People with a belief in internal control are more likely to change their behaviour following positive or negative reinforcement, than people with a belief in external control. However, for behaviour change to occur, the reinforcement must be of value to the person (Marks, 1998). The belief in the existence of a strong causal-effect relationship between their actions and outcome allows them to make an effort to change their behaviour and actions in order to change the outcome. People with an external locus of control believe that their own actions are dependent on factors outside their personal control (Landy & Conte, 2004; Martin, Thomas, Charles, Epitropaki & McNamara, 2005). The consequences of behaviour are randomly administered, and are thought to be controlled by outside forces such as: chance, fate, luck, powerful others, or societal imperatives (Connolly, 1980).

Levenson (1973) presented a multi-dimensional view of locus of control that separated external control into: control by powerful others, and control by chance and luck. Belief in control by powerful others can be due to an individual belief of being physically or intellectually weak in relation to others around him or her. Therefore, for these individuals, externality is defined due to the competitive environment. On the contrary, a belief in luck or fate may be accompanied by a mindset that luck is on the individual's side or against him or her. Optimistic or pessimistic, the individual will be described as external (Hersch & Scheibe, 1967) Externals are reluctant to change behaviour, as they do not see it as a primary source for altering reinforcements (Marks, 1998). Even in the case of positive reinforcement, the credit may not be taken personally, but reflected upon as ease of task, luck or as a result of a helpful hand by a powerful other (Hyatt & Prawitt, 2001).

Figure 1: Locus of control shown as a continuum with two opposing differentiates (Rotter, 1966)



Locus of Control and Success

With its basis in reinforcement, locus of control directly affects behaviour and performance (Lee-Kelley, 2006). An individual's locus of control expectancy allows reinforcement to be attributed to four possible factors: ability, effort, task difficulty and luck (Weiner, Frieze, Kulka, Reed, Rest & Rosenbaum, 1971). While ability and effort are regarded as success factors by internals, external factors of task difficulty and luck are regarded as success determinants by externals (Lee-Kelley, 2006).

Kalechstein and Nowicki (1994) concluded that an internal locus of control is related to greater academic achievement; thus, academic success. However, academic success does not guarantee success in the workplace. Nonetheless, an expectancy that effort leads to success is a crucial element in generating initiative to work, which can lead to career success. The stronger the perceived relationship between initiative and success, the more worthwhile initiative becomes, and the more likely it is to be demonstrated (Andrisani&Nestel, 1976). This translates into a belief of personal control of rewards and outcomes. In the case of a negative reinforcement, these individuals persist that failure is a result of a lack of effort on their part; therefore, one must try harder to bring about a successful outcome. This makes internals proactive (Covey, 1993) and hard working in order to achieve their goals, which means that these goals are more likely to be achieved by these individuals (Lee-Kelley, 2006).

The link between internal locus of control and successful management may be explained by the fact that individuals with an internal locus of control have faith in their ability to achieve self-appointed objectives (Klein & Wasserstein-Warnet, 1999) and to transform the environment (Andrisani&Nestel, 1976; Klein & Wasserstein-Warnet, 1999). They feel personally responsible for the job's success, and when something backfires, it is attributed to inadequate participation on their part in their own failure to steer the team properly (Klein & Wasserstein-Warnet, 1999). On the contrary, externals attribute success and failure to factors such as luck, coincidence, fate, or the influence of people stronger than themselves (Klein & Wasserstein-Warnet, 1999). Externals are less attracted to achievement-related tasks, since failure is more likely to be attributed to the nature of the task and luck (Lee-Kelley, 2006).

Similarly to success, in respect of leadership, Hiers and Heckel (1977), Anderson and Schneier (1978), and Mc Cullough, Ashbridge and Pegg (1994) all reported that successful leaders were endowed with a high internal locus of control, whereas less successful ones typically had a low internal locus of control.

Leadership

Leadership may be defined as 'a process whereby an individual influences a group of individuals to achieve a common goal' (Northouse, 2010, p. 3). Further, Kelloway&Barling (2010) define leadership as a process of social influence that is enacted by individuals in formal positions of power or leadership positions within an organisation, such as managers and supervisors. Although leadership is not confined to individuals in formal leadership positions, it is argued that these individuals may have a particularly wide remit of influence within an organisation (Kelloway&Barling, 2010).

Leadership is not tantamount to management although they both share some common characteristics. For instance, they are both concerned with influence, working with people and meeting goals (Northouse, 2010). However, the functions of management may be distinguished from those of leadership. In particular, management is concerned with planning and budgeting (e.g. setting timetables and allocating resources), organising and staffing (e.g. establishing rules and procedures) and controlling and problem solving (e.g. developing initiatives and generating solutions) (Kotter, 1990; cited in Northouse, 2010). On the other hand, leadership involves establishing a direction (e.g. creating a vision and establishing strategies), aligning people with organisational goals (e.g. communicating goals and seeking commitment) and motivating and inspiring people to achieve organisational goals (e.g. empowering subordinates) (Kotter, 1990; cited in Northouse, 2010). Despite these differing functions, leaders are also involved in planning and organising tasks in order to get the job done (i.e. management function) and similarly managers are often involved in helping groups achieve their goals (i.e. leadership function) (Northouse, 2010).

Theoretical Framework

Operational Definition for the factors of Locus of Control:

- Internal Locus of Control: Individuals with a high internal locus of control believe that events result primarily from their own behavior and actions.
- External Locus of Control: Individuals with high external locus of control (chance or others) believe that powerful others, fate, or chance primarily determine events (Fig. 1).

Objectives Of The Study

To identify the type of Locus of Control (i.e. Internal or External) of the Business Management Students.

To study the impact of Locus of Control on Leadership

Hypothesis Of The Study

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Ho – A linear relationship does not exist between Dependent Variable (Leadership Score) and Independent Variable (Powerful Others, Chance Control and Individual Control)

H1 - A linear relationship exist between Dependent Variable (Leadership Score) and at least one of the Independent Variable (Powerful Others, Chance Control and Individual Control)

Methodology

The responses on Locus of Control was taken on a structured questionnaires from 100 students of Business Management Course. Finally 78 questionnaires complete in all respects were used to carry out the analysis. For Locus of Control, questionnaire designed by Levenson (1972) having 24 items was used. For Leadership testing a questionnaire was designed. It had 39 items. The responses were collected on a five point likert scale ranging from 1 (Strongly Agree to Strongly Disagree). It was got validated by 10 experts 6 of whom belonged to academic fraternity and 4 were well known trainers and consultants. Reliability was checked by Cronbach's Alpha test of Reliability. Cronbach Alphas value is .893 (which is very high). (Table 1).Tools used for analysis were mean, ratio analysis and regression analysis.

Table 1 Reliability Statistics

Cronbach's Alpha	N of Items
.893	39

Findings And Discussions

In this study information was gathered on demographic variables of the respondents such as age, gender, qualifications, religion and family structure. The respondents were students of management programme. 41% (32 out of 78) of the respondents were females. Majority (56.4%; 44 out of 78) were in the age group 22-24 years (42.3%; 33 out of 78).

77% (60 out of 78) belonged to Nuclear Family structure. 68% (53 out of 78) of students were from commerce background, followed by humanities and science background in terms of educational qualifications. Majority students (85%) were Hindus.

Table 2 – Table showing demographics of respondents

Demographics		Male	Female	Total
Age	18-20	1	0	1
	20-22	21	23	44
	22-24	24	9	33
	Total	46	32	78
Family Structure	Nuclear Family	35	25	60
	Joint Family	11	7	18
	Total	46	32	78
Qualification	Humanities	15	7	22
	Commerce	29	24	53
	Science	2	1	3

	Total	46	32	78
Religion	Hindu	41	25	66
	Christian	1	1	2
	Muslim	1	0	1
	Sikh	2	4	6
	Any other	1	2	3
	Total	46	32	78

Analysis of Objective

The aim is to identify Locus of Control (Internal or External) in students pursuing management program.

Ratio Analysis

In the present study, ratio analysis was used to find out the type of Locus of Control of Management Students. Totally three ratios were calculated. They were

Externality (Powerful Others) /Internality (Individual Control)

Externality (Chance Control) / Internality (Individual Control)

Total Externality (Powerful others + Chance Control) / Internality (Individual Control)

The results of these three ratios were 1.11, 1.005 and 1.05 respectively. As all of them were more than 1, we can say that good amount of students have external locus of control.

Mean

Mean was also used to identify the type of Locus of Control present in the students. Table 3 shows that both the factors representing externality (Powerful Others and Chance Control) have higher means (6.05 and 5.47 respectively) as compared to Internality (Individual Control) (5.44 mean score).

Table 3 Table showing Mean Scores of External (Powerful Others and Chance Control) and Internal Locus of Control

Locus of Control	Mean	Standard Deviation
Powerful Others (External)	6.05	2.532
Chance Control (External)	5.47	2.062
Individual Control (Internal)	5.44	2.344

The mean score for external locus of Control (Powerful Others) is the highest, indicating that the students put the onus of whatever good or bad happening to them on powerful others and not on their own doings or efforts. These powerful others can be parents, teachers, their seniors or any one in their external environment. This also indicates that these students would not take responsibility and will find reasoning of some external influence for some wrong doing or happening. They will not take initiatives and will not come out with innovative ideas.

Mean score for Chance Control is 5.47 indicating that substantial number of students believe that whatever good or bad that happens is controlled by Chance or fate. The believers in luck, fate or chance again are not proactive and always take a back seat.

The mean score for individual control or internal locus of Control is 5.44 which is the lowest. It indicates that students have less internal drive. They do not take the responsibility and onus of the happenings in their surroundings. Internals have a tendency to learn from their experiences (experiences can be failures also). The mean score for internal Locus of Control is in medium range.

$b_1 = -1.690$ is the slope of y (Leadership score) with independent variable x_1 (Powerful Others), holding variable x_2 (Chance Control) and x_3 (Individual Control) constant. The negative sign of the coefficient b_1 indicates an inverse relationship between the dependent variable Y (Leadership Score), and independent variable x_1 (Powerful Others). This means that holding x_2 (Chance Control) and x_3 (Individual Control) constant, unit increase in score of x_1 (Powerful Others), will result in -1.69 decline in Leadership scores of a student.

$b_2 = -0.196$ is the slope of Y (Leadership score with independent variable x_2 (Chance Control), holding x_1 (Powerful Others) and x_3 (Individual Control) Constant. The negative sign of the coefficient b_2 indicates an inverse relationship between the dependent variable Y (Leadership Score) and independent variable x_2 (Chance Control). This means that holding x_1 (Powerful Others) and x_3 (Individual Control) constant, unit increase in score of x_2 (Chance Control) will result in -0.196 decline in leadership score of a student. As per the result the impact of Chance Control on Leadership score is not significant. $b_3 = 1.364$ is the slope of Y (Leadership Score) with independent variable x_3 (Individual Control), holding variable x_1 (Powerful Others) and x_2 (Chance Control) constant. The positive sign of the coefficient b_3 indicates direct relationship between the dependent variable Y (Leadership Score) and independent variable x_3 (Individual Control). This means that holding x_1 (Powerful Others) and x_2 (Chance Control) constant, unit increase in score of x_3 (Individual Control) will result in +1.364 increase in leadership score of a student. As per the result the impact of Individual control on leadership score is significant and positive.

Table 4 Regression Table

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2953.016	3	984.339	5.718	.001 ^a
	Residual	12739.663	74	172.158		
	Total	15692.679	77			

a. Predictors: (Constant), Individualcontrol, Chancecontol, Powerfulothers

b. Dependent Variable: Total score of Leadership

Table 5 – Impact of LOC on Leadsership

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	155.823	6.366		24.476	.000
	Powerful others	-1.690	.713	-.300	-2.372	.020
	Chancecontol	-.196	.837	-.028	-.235	.815
	Individual control	1.364	.675	.224	2.021	.047

a. Dependent Variable: Total score of Leadership

Regression Model

Partial Regression Output

Table 6 – Partial Regression Output

Model Summary

The sample Y intercept b_0 is computed as 155.823. This indicates that leadership score would be 155.823 when both external and internal Locus of Control (Powerful Others, Chance Control and Individual Control) are zero. In other words, $b_0 = 155.823$ is the leadership score, when x_1 (Powerful Others), x_2 (Chance Control) and x_3 (Individual Control) are equal to zero. The practical interpretation of b_0 is limited.

Partial Regression Output

Table 6 – Partial Regression Output

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.434 ^a	.188	.155	13.121

a. Predictors: (Constant), Individualcontrol, Chancecontol, Powerfulothers

$$R^2_{y,123} = \frac{\text{Regression Sum of Squares}}{\text{Total sum of Square}} = \frac{SSR}{SST} = \frac{2953}{15693} = 0.188$$

$R^2_{y,123}$ = Coefficient of multiple Determination

This implies that 18 % of the variation in leadership score is explained by variation in individual control, chance control and powerful others. The coefficient of Determination (R^2) measures the proportion of variation in dependent variable Y (here

leadership score) that can be attributed to the combination of independent variable x (explained by the combination of independent (explanatory) variables.

If we add independent variables in the regression analysis, the total sum of squares will not change. Inclusion of independent variable is likely to increase SSR by an amount, which may result in an increase in the value of R^2 . In this manner, sometimes we may obtain an inflated value of R^2 . This Difficulty can be solved by taking adjusted R^2 into account which considers both the factors, that is the additional information that an additional independent variable brings to the regression model and changed degrees of freedom. The adjusted R^2 formula can be given as adjusted co-efficient of multiple determination (Adjusted R^2).

$SSE / n-k-1$

$$\text{Adjusted } R^2 = 1 - \frac{\text{SSE} / n-k-1}{\text{SST} / n-1}$$

$$= 1 - \frac{15693 / 77}{12740 / 74}$$

$$= 1 - \frac{203.80}{172.16}$$

$$= 1 - 0.844$$

$$= 0.155$$

$SSE / n-k-1$

This indicates that 15.5% of the total variation in leadership score can be explained by multiple regression model adjusted for the number of independent variables and sample size.

Standard Error of Estimate

Table 6 shows partial regression outputs produced using SPSS. Standard Error can be understood as the standard deviation of errors (residuals) around the regression line. In a multiple regression model, the standard error of the estimate can be computed as

$$\text{Standard Error} = \sqrt{\text{SSE} / (n-k-1)}$$

Where n is the number of observations and k the number of independent (explanatory) variables

$$\text{Standard Error} = \sqrt{\text{SSE} / (n-k-1)}$$

$$= \sqrt{12740 / (78 - 3 - 1)}$$

$$= \sqrt{12740 / 74}$$

$$= \sqrt{172.16}$$

$$= 13.121$$

Conclusion

Business School has the responsibility of grooming the budding managers and leaders and honing their skills to face the dynamic and competitive global corporate environment. Business School these days rather than just only providing theoretical knowledge to the Business Management students, take deep interest in developing personal and professional skills of students. Locus of Control is

an important aspect of the personality; hence lot of attention has been paid to it in the present study. The study shows that majority of students have external locus of control. More number of students are influenced by powerful others followed by chance control. They have to be made more independent so that they are able to take responsibility and onus of their doings in order to make them better and effective leaders and managers in future. This is being done by creating self awareness and self realization in the students to enable them rectify their approach in life.

As per regression analysis it has been observed that leadership score (dependent variable) of students is inversely effected by powerful others and directly effected by individual control. Hence we can conclude that, for students to be groomed into good leaders of tomorrow they should have more individual control over themselves and situation and should be less effected in decision making and their working by powerful others.

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