

AN EMPIRICAL STUDY OF TRAITS DETERMINING ENTREPRENEURIAL LEADERSHIP- AN EDUCATIONAL PERSPECTIVE

Saif Siddiqui

Abstract

Entrepreneurial leadership is taken as an interdisciplinary field of study, which integrates entrepreneurship with leadership to create some thing of enormous worth. Entrepreneurial leadership involves behaving and acting with entrepreneurship in the interests of the organization for the growth of all stakeholders involved and realizing the proposed purpose and idea. The key task an entrepreneurial leader performs is to look for a venture, guide others to recognize the value and opportunities in that and exploit it with the followers. The entrepreneurial leadership has the ability to inspire subordinate, especially in organisation with risky character, but behavior remains the critical element in entrepreneurial leadership process. The relation between traits and behavior is evident. Traits of entrepreneurial leader are a combination of traits of an entrepreneur and of a leader. Here, these identified traits are reduced to seven specific groups using factor analysis. The model depicts the way to incorporate entrepreneurial leadership traits through education

Key words: education, entrepreneurship, leadership, traits and entrepreneurial leadership

Introduction

An entrepreneur is a person who undertakes and operates an enterprise or a venture, assumes accountability and bears the risks associated. He or she is a person of high skill and aptitude, who pioneers change at various levels. The focus in small firms too, is on the entrepreneur, who discovers and takes advantage of opportunities in environment and resources in the firm (Chandler & Hanks, 1994) and develops a strategic vision (Westley & Mintzberg, 1989) to move ahead. Entrepreneurs hold a combination of traits found in only a very small fraction of the population. These traits give rise to entrepreneurship. Simply stating, entrepreneurship is what an entrepreneur does.

Writers like Shane and Venkataraman (2000) question whether research in entrepreneurship predicts phenomena beyond what is known in other fields. They speak that if the constructs and results of such research are not sufficiently unique, then it should be subsumed under the heading of other fields e.g., leadership or interpersonal influence. Various researchers including Harrison and Leitch (1994) favoured the development of entrepreneurship as an independent but interdisciplinary field of study parallel to the development of leadership studies. The diverse and separate academic area of entrepreneurship is also evident in the divergent research streams of "entrepreneurial traits" and "entrepreneurial rates." Entrepreneurial trait research focuses on the individual differences of entrepreneurs. Entrepreneurial rate research examines environmental influences on the propensity to initiate or to innovate (Thornton, 1999). It may also be said that entrepreneurship has an apparent economic cause. Leadership may or may not be having so. This argument is an attempt to mark a dividing line between entrepreneurship and leadership.

But, Covin and Slevin (1991) raised the issue that entrepreneurship is a firm-level phenomenon and identified several advantages in looking at entrepreneurship research from a firm-level behavioural perspective. They presented the concept of 'entrepreneurial effectiveness' that is, the effectiveness of an entrepreneur can be measured by their organization's performance. It is also noted that organisational effectiveness is a function of leadership. (Bass and Avolio, 1994). It is also mentioned by Mintzberg, (1971) that two key roles performed by the managers are that of a leader and of an entrepreneur. It seems that the concepts of entrepreneurship and leadership can be associated.

It is notable that entrepreneur and entrepreneurship do not appear in the leadership literature but leadership appears in the literature of entrepreneurship. It may be argued that entrepreneurship is not perceived as a necessary part of leadership success, but leadership is an element of entrepreneurial success. As commented by Cammarano

(1993), who identify leadership as critical to entrepreneurial growth, leadership plays a key role in the survival and success of entrepreneurial ventures. A leader has to be entrepreneurial as well. (El-Namaki, 1992). As argued earlier, Entrepreneurship is different from leadership, but their fusion for a third concept is beneficial.

Researchers have recognised the need for a different type of leadership to lead organisations in the face of these new challenges (McGrath, 1999; Teece, Pisano & Shuen, 1997). This approach seems critical for entrepreneurial studies i.e. to link entrepreneurship with leadership.

Various titles have been given to the integration of entrepreneurship with organization success. They are: corporate entrepreneurship (Zahra, 1991; Dess et al., 1999; Barringer & Bluedorn, 1999), intrapreneurship (Kuratko et al., 1990), strategic posture (Covin & Slevin, 1988; 1989) and entrepreneurial orientation (Lumpkin & Dess, 1996; Knight, 1997; Wilkund, 1999). Researchers named this new type of leadership as "entrepreneurial leadership" claiming that it shows both entrepreneurial and leadership characteristics and behaviour (Ireland & Hitt, 1999; McGrath & MacMillan 2000, Meyer & Heppard, 2000).

Entrepreneurial leadership thus involves behaving and acting with entrepreneurship in the interests of the organization for the growth of all stakeholders involved and realizing the proposed purpose and idea. It can be said that the key tasks an entrepreneurial leader performs is to look for a venture, guide others to recognise the value and opportunities in that and exploit it with the followers.

In this paper an attempt is made to take a deeper look and to develop a model on the basis of various traits determining entrepreneurial leadership in a real time situation. Fifteen different traits have been identified, which are comprised of the general traits of leader and entrepreneur both.

Review of literature

Gupta, MacMillan and Surie (2004) opine that in the increasingly turbulent and competitive environment business firms face today, a type of "entrepreneurial" leader distinct from other behavioral forms of leadership is required. Prabhu (1999) defined Social entrepreneurial leaders, as persons who create and manage innovative entrepreneurial organizations or ventures whose primary mission is the social change and development. The social enterprise's activities can primarily be either economic or non-economic, but the mission is social change and development. Baum, Locke, & Kirkpatrick (1998) said that the ability to inspire and motivate subordinates, especially in light of the risky character that surrounds early start-up conditions, is a critical attribute for a founder. Research on leader charisma and vision has particular relevance to entrepreneurship.

Oliver and Paul(1997) illustrate different strategies that leaders in these states(Massachusetts, Oregon, Florida, Minnesota, Vermont, and Washington State) used to carry out the entrepreneurial tasks of identifying a market opportunity, designing an innovation, attracting political investment, marketing the innovation, and monitoring its early production. Raino (1995) concluded that governments, organizations and individuals who do something out of the ordinary to influence the course and outcome of international negotiations, are sometimes called leaders or entrepreneurs. Witt (2000) explores the role of entrepreneurship and its cognitive underpinnings, particularly with regard to the nucleus (multi-person) firm, i.e. a newly started entrepreneurial business. Harrison and Leitch (1994) favoured the development of entrepreneurship as an interdisciplinary field of study parallels the development of leadership studies. They reviewed the emergence in leadership research of themes relevant to an understanding of entrepreneurship and use this to set the evolution of entrepreneurship education.

Swiercz and Lydon (2002) highlighted many known reasons for failing of hot start-ups. He described the most critical factor as the leadership ability of the entrepreneurial CEO. He found no evidence that professional managers perform better in high-growth firms than the original founder. The research revealed two distinct sets of leadership competencies – labeled self competencies and functional competencies – required of entrepreneurs aspiring to remain at the helm of growth-driven high-tech firms. Neck, Neck, Manz and Godwin (1999) said that the application of cognitive strategies to the entrepreneurship domain is sparse. They proposed that the application of these principles to the entrepreneurial process offers the potential to enhance individual performance and mental states for both practicing and aspiring entrepreneurs. Propositions derived from the proposed framework are developed to serve as catalysts for empirically testing the applicability of Thought Self-Leadership to the entrepreneurship context

Man, Lau, and Chart (2002) concluded that the extensive literature on small business leadership often overemphasizes the charismatic and visionary variety and slights the transactional, autocratic, and empowering leadership types. Contrary to expectations, the leadership profiles in the two configurations were similar, suggesting that leaders, regardless of their style, should be able to move successfully among different types of organizations. Whalen, Khin-Maung-Gyi and Smithwick (2004) said that three leaders of a ten-year-old start-up company reveal how they have used transparent/entrepreneurial leadership to create employee commitment, inculcated core values to drive organizational behavior, and made clear communications a competitive advantage.

Concepcion and Gilberto (2004) argued the entrepreneurial leadership which is essential for organizational and personal success is subject to the gender differences encountered in all aspects of life. Assche (2005) argues that entrepreneurial leadership of European Commission president Jacques Delors was a necessary factor in the creation of an Economic and Monetary Union (EMU). More specifically, it examines Delors's role during the creation and duration of the Delors Committee in which a group of member state central bank governors and experts met to examine how an EMU could be accomplished. Peters (2005) evaluated the leadership skills and entrepreneur's or owner/manager's ability to motivate apprentices and other young employees. Specifically, it investigates young employees' perceptions about leadership and motivational behaviour in small- and medium-sized hotel. Baum and Locke (2004) highlight that research on entrepreneurship and leadership theories has guided hypotheses regarding the relationship between

entrepreneurial traits and skill (passion, tenacity, and new resource skill) and situationally specific motivation (communicated vision, self-efficacy, and goals) to subsequent venture growth. Covin and Slevin (1991) also argued that it is behaviors and not attitudes that give meaning to the entrepreneurial process. That is, the entrepreneur and their firms are known through their actions and their behaviors. Thus, behavior is the central element in the entrepreneurial process. Devarajan, Ramachandran and Ramnarayan (2007) have identified following factors influencing Entrepreneurial Leadership. These are Strategic Factors (a) Developing a Research conception, b) Using an Appropriate Innovation Strategy, c) Acquiring and constantly upgrading technical resource stocks And Behavioural Factors (a) Building an Entrepreneurial Organisation, b) Deftness in the Top Management Team and c) Creating a Shared Passion for Innovation

From the above written literature it is concluded the entrepreneurial leadership has the ability to inspire subordinate, especially in organisation with risky character, but behavior remains the critical element in entrepreneurial leadership process. It can be used to create employee commitment and inculcate core values too. Literature often emphasise the charismatic and visionary leader as entrepreneur and vice versa. Entrepreneurial leader carries out the entrepreneurial task of identifying market opportunity, designing an innovation, market the innovation and its production. He creates some thing out of the ordinary to influence the course and the out come. It is taken as an interdisciplinary field of study which integrates entrepreneurship with leadership to create some thing of enormous worth.

Objectives of the study

Objectives of the study are:

- To explore various traits determining entrepreneurial leadership
- To identify various groups in which the traits under study can be categorized and
- To prepare a model of incorporating entrepreneurial leadership through education, on the basis of various traits groups identified.

Hypothesis:

The null hypothesis is stated as the population correlation matrix is an identity matrix or in other words variables (as shown in exhibit 1) are uncorrelated in the population.

Methodology of the study:

Primary data was collected for the purpose of present study. A non- disguised structured schedule was served in Delhi and NCR to collect data on different traits of entrepreneurial leadership. For the purpose of present study, an entrepreneur is defined as:

- A male person,
- Who is a first generation entrepreneur,
- Operating a small scale manufacturing unit,
- Actively participating in processes of unit and
- No other person is there to lead, but the entrepreneur

For choosing these samples, judgment cum convenience sampling technique was used. The filled schedule was received from 347 respondents. Along with serving the schedule, extensive research was made to collect review of literature on the topic of entrepreneurial leadership.

Measurement:

To analyse 15 traits of entrepreneurial leadership, entrepreneurs were asked a question: to what extent these 15 traits are significant for your entrepreneurial success. Each trait is judged separately on

a 5 points likert scale ranging from 'highly significant to 'highly insignificant'. A weight of 5 was assigned to 'highly significant' and a weight of 1 was assigned to 'highly insignificant'.

Technique of data analysis:

Data so collected is subject to factor analysis to bring out the more significant factors/traits, which determine entrepreneurial leadership among entrepreneurs. Factor analysis is used to summarize the information contained in large number of variables into smaller numbers of factors, for better decision making.

Limitations

- This survey was confined to the Delhi and NCR only. This may effect the generalization of results.
- The sample of 347 is relatively smaller to make a very comprehensive study
- The possibility of bias in response can not be removed completely and
- Age of the entrepreneur is not taken into consideration

Data analysis

Before applying factor analysis the data is required to be tested for appropriateness. In present study, Kaiser-Meyer–Oklin (KMO) measure of sampling adequacy and Bartlett's test of Sphericity were applied to verify the adequacy or appropriateness of data for factor analysis. For analysis, Principal component method was used followed by varimax rotation.

Principal component analysis is a method to transfer a set of interrelated variables into a new set of uncorrelated components which account for all the variance in the original variables. SPSS 10.0 was used for all the related calculations.

KMO and Bartlett's test

The results of the tests is contained in exhibit 2

The KMO value varies between 0 and 1 and accepting values above 0.5 as acceptable is recommended (Kaiser, 1974). The data in present study reveal that KMO for the matrix is 0.529. It indicates that sample taken for the purpose of the study is adequate. Bartlett's test of Sphericity is also used for verifying the appropriateness of the data for factor analysis. The test should be significant (Bartlett, 1950). For the present data, the chi sq at 105 degree of freedom is 174.111. Since, this value is significant at .05, *so null hypothesis is rejected*.

After examining the reliability of the scale and testing the appropriateness of the data, factor analysis can be carried out to identify the traits effecting entrepreneurial leadership

Exhibit 3 holds the correlation coefficients of variables under study. It can be seen in self explanatory table that correlation among variables varies between – 0.076 and 0.212. It is also viewed that variables are not highly correlated.

Communalities

Communalities are the proportion of variance in a variable explained by the components. Principal component analysis works on initial assumption that all variance is common, therefore before extraction communalities are all 1. Extracted communalities are obtained using extracted components. It can be calculated from the rows of component matrix.

It is evident from exhibit 4 that 76.90% of variance in v15 (innovation) is explained by the extracted components, While it is 70.20% in v3 (Enthusiasm to Accept Responsibilities). It is as high as 67.50% in v11 (ability to take risk) and 65.60% in v12 (need to achieve) and as low as 46.10% in v13 (Dominance and assertiveness) and 45.70% in

v10 (Capacity to Win and hold trust). Variance explained by *Ability to deal with community at large is least* i.e. 38.80%

Total Variance Explained

Exhibit 5 provides information on total variance explained, which gives information about the number of useful components. It shows Eigen values associated with each component before extraction, after extraction and after rotation. Eigen value indicates the amount of variance accounted for by each component. Initial Eigen value gives the variance explained by all possible components.

The first component explains the maximum variance in all variables i.e. 10.499 %. Second component explains the maximum amount in remaining variance i.e. 9.251 %. Third and fourth components account for 8.757 % and 7.936 % of total variance respectively. It is also noted that seventh component accounts for 6.684% variance.

The second portion titled extracted sums of squared loading gives information for components with Eigen value more than 1. There are 7 components with Eigen value more than 1, hence suggesting a seven – component solution.

Last part informs about the extracted components after rotation. For this part %age of variance would change but total cumulative %age remain same.

Component matrix

This type of matrix is known as a matrix of component loading, which is the correlation between principal component score and the original variables. Table no.6 is showing the loading of each variable on to each component. The loading in the matrix is not easy to interpret due to high loading on more than one component for one variable. For a good solution a variable should load highly on one component and low on others. It is noted that v1, v4, v5, v7, v9, v11, v12 and v14 face the problem of similar or high loading on more than one component. Rotation can solve this problem

Rotated component matrix

The purpose of rotation is to find a simple structure. The varimax rotation enhances the interpretability of the principal components. With the rotation each component correlates high with smaller number of variables and correlate low with other variables. It should be noted that figures lesser than 0.5 are suppressed.

As it can be seen in exhibit 7, that component 1 loaded high on thoughtful about associates, ability to motivate, capacity to win and hold trust and dominance and assertiveness. Component 2 is highly loaded action oriented intelligence and judgment and self belief. For third component physical vitality and stamina and capacity to set priorities are found to be highly loaded. For fourth component, need to achieve and flexibility and adaptability are loaded. Fifth component is highly loaded on courage and ability to take risk. For sixth and seventh component, enthusiasm to accept responsibility and innovation respectively are highly loaded

Teaching Entrepreneurial leadership traits

Entrepreneurial leadership traits can be developed through education. It is seen that a large gap exists between educational programs and entrepreneurship in practice. Educational programs most of the time, is not based upon knowledge obtained through research. Besides, entrepreneurial individuals do not always seem to profit from educational programs (Solomon, Weaver and Fernald, 1994).

Entrepreneurship education programs may be developed considering following points:

- Time frame of entrepreneurship education
- How entrepreneurial leadership should be taught
- Implications of entrepreneurial leadership learning

When Should Entrepreneurial leadership traits be taught?

It may be argued that 'consciousness' programs can be offered to groups lacking the basic knowledge of entrepreneurship, whereas 'inclination' programs can be offered to those having sufficient awareness of basic concepts. Teaching should involve increasing complexity, starting out with creating consciousness and moving towards the application of entrepreneurial leadership qualities in any tentative setting. Importance of teaching traits of entrepreneurial leadership lies at an early age, i.e., with primary and secondary education. The spotlight of entrepreneurship education should shift from persuading a different approach towards life (consciousness) to teaching entrepreneurial qualities at a higher level (inclination).

How Should Entrepreneurial leadership be taught?

Experience-based learning is the best option, which advocates that students are involved in the learning experience by making decisions and personally bearing the consequences of those decisions. Specifically designed projects aimed at developing entrepreneurial leadership qualities, can be taught more indirectly, through adopting more entrepreneurial modes of teaching and learning.

Gibb (1998) also argue that young people should 'feel' and experience the concept of entrepreneurship, rather than just learn it in the more conventional manner. The emphasis should be on pedagogies that encourage learning: by doing, by experience, by experiment, by risk taking and making mistakes, by creative problem solving, by feedback through social interaction; by role playing, by exploring role models; and by interaction with the adult world

Entrepreneurial leadership learning should be facilitated through the development of an appropriate learning environment. The learning environment should:

- Be practical and encourage activity based learning and
- Relates to real-life situations which should include role models

Stumpf, Dunbar and Mullen (1991) advocate the use of behavioral simulations to develop entrepreneurial qualities. In this view behavioral simulation involves the linkage of objectives to specific roles of instructors and students. For instance, to identify and stimulate entrepreneurial drive, talent and skill the instructor should be a counselor or coach, listening, observing and giving feedback, whereas the student should actively reflect, share insights and explore different viewpoints and experiences.

It may be argued that different entrepreneurial leadership qualities require different teaching methods and a different educational environment.

Conclusion:

From the above discussion, it is concluded that:

- The traits that determine entrepreneurial leadership are not highly correlated.
- Out of total traits under study, different categories (exhibit 8), in order of importance to the respondents, are formed after identifying common themes.
- These categories are used in the model (exhibit 9) to identify a possible sequence of factors to be incorporated between two stages.

It is worth mentioning that the difference in the variance explained by components is not large. So, it can be taken that difference between degrees of importance between the categories, for the respondents, is not vast.

It is taken that *Experience-based learning* is the best option of incorporating entrepreneurial leadership traits in a person. Which involve the learning experience, in an appropriate

environment, by making decisions and personally bearing the consequences of those decisions

As mentioned earlier that Model of incorporating traits of entrepreneurial leadership is formed as exhibit 9. Sequence of factors may be changed as per the requirement of the module or Entrepreneurship Development Program. (EDP).

Suggestion for further research:

- The research on traits of entrepreneurial leaders can be extended to other region of the country as well
- It is suggested that a similar study of longitudinal nature can be initiated to examine any change over time and
- Separate studies for men and women entrepreneurs can be taken to compare results thereof

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S. No.	Traits
V1	Physical Vitality and Stamina
V2	Action oriented Intelligence and Judgment
V3	Enthusiasm to Accept Responsibilities
V4	Self belief
V5	Thoughtful about associates
V6	Ability in Dealing with community at large
V7	Capacity to Set Priorities
V8	Ability to Motivate
V9	Courage and stability
V10	Capacity to Win and Hold Trust
V11	Ability to take risk
V12	Need to Achieve
V13	Dominance and Assertiveness
V14	Adaptability and Flexibility of Approach
V15	Innovation

Exhibit 2: KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.529	
Bartlett's Test of Sphericity	Approx. Chi-Square	174.111
	df	105
	Sig.	.000

Exhibit 3: Correlation Matrix

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
V1	1.000	.047	.027	.157	-.070	.094	-.074	-.076	.083	-.025	.009	.052	-.050	.047	.065
V2	.047	1.000	.101	.020	-.054	-.080	.110	-.058	.044	.053	-.007	-.052	-.070	.095	.048
V3	.027	.101	1.000	.157	-.046	.065	-.028	.103	.069	.025	.035	-.009	.128	.002	-.062
V4	.157	.020	.157	1.000	.008	.042	.016	-.043	.070	.051	.034	-.017	.058	.034	-.049
V5	-.070	-.054	-.046	.008	1.000	-.011	.059	.106	.104	.141	.006	-.006	.206	-.117	.043
V6	.094	-.080	.065	.042	-.011	1.000	-.062	.031	-.052	-.004	-.017	.101	.068	-.006	-.036
V7	-.074	.110	-.028	.016	.059	-.062	1.000	.067	.036	.099	-.010	-.011	-.047	.032	.027
V8	-.076	-.058	.103	-.043	.106	.031	.067	1.000	.035	.212	-.013	-.035	.123	.018	.062
V9	.083	.044	.069	.070	.104	-.052	.036	.035	1.000	.069	.158	-.019	.053	-.009	.016
V10	-.025	.053	.025	.051	.141	-.004	.099	.212	.069	1.000	.049	.066	.137	.023	-.016
V11	.009	-.007	.035	.034	.006	-.017	-.010	-.013	.158	.049	1.000	-.004	-.006	.010	-.004
V12	.052	-.052	-.009	-.017	-.006	.101	-.011	-.035	-.019	.066	-.004	1.000	.088	.128	-.087
V13	-.050	-.070	.128	.058	.206	.068	-.047	.123	.053	.137	-.006	.088	1.000	.009	.034
V14	.047	.095	.002	.034	-.117	-.006	.032	.018	-.009	.023	.010	.128	.009	1.000	.038
V15	.065	.048	-.062	-.049	.043	-.036	.027	.062	.016	-.016	-.004	-.087	.034	.038	1.000

Exhibit 4: Communalities

Variables		Initial	Extraction
V1	Physical Vitality and Stamina	1.000	.627
V2	Action oriented Intelligence and Judgment	1.000	.508
V3	Enthusiasm to Accept Responsibilities	1.000	.702
V4	Self belief	1.000	.552
V5	Thoughtful about associates	1.000	.602
V6	Ability in Dealing with community at large	1.000	.388
V7	Capacity to Set Priorities	1.000	.546
V8	Ability to Motivate	1.000	.551
V9	Courage and stability	1.000	.539
V10	Capacity to Win and Hold Trust	1.000	.457
V11	Ability to take risk	1.000	.675
V12	Need to Achieve	1.000	.656
V13	Dominance and Assertiveness	1.000	.461
V14	Adaptability and Flexibility of Approach	1.000	.617
V15	Innovation	1.000	.769

Extraction Method: Principal Component Analysis.

Exhibit 5: Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.575	10.499	10.499	1.575	10.499	10.499	1.532	10.213	10.213
2	1.388	9.251	19.750	1.388	9.251	19.750	1.251	8.340	18.553
3	1.314	8.757	28.506	1.314	8.757	28.506	1.235	8.235	26.789
4	1.190	7.936	36.443	1.190	7.936	36.443	1.193	7.955	34.744
5	1.097	7.311	43.754	1.097	7.311	43.754	1.176	7.841	42.584
6	1.084	7.225	50.979	1.084	7.225	50.979	1.156	7.706	50.291
7	1.003	6.684	57.663	1.003	6.684	57.663	1.106	7.372	57.663
8	.951	6.339	64.001						
9	.889	5.928	69.929						
10	.867	5.780	75.709						
11	.835	5.564	81.273						
12	.777	5.178	86.451						
13	.711	4.737	91.188						
14	.688	4.588	95.776						
15	.634	4.224	100.000						

Extraction Method: Principal Component Analysis.

Exhibit 6: Component Matrix

	Components						
	1	2	3	4	5	6	7
V1		.575				.386	
V2			.590				
V3		.452			-.578		
V4		.559					.371
V5	.536	-.302					.359
V6			-.511				
V7			.454	.312			.400
V8	.538						-.336
V9	.337		.327	.368	.327		
V10	.589						
V11				-.316	.380	-.374	-.438
V12			-.378	.462	.400		
V13	.582		-.313				
V14		.301		.612			
V15						.760	

Extraction Method: Principal Component Analysis.
a 7 components extracted.

Exhibit 7: Rotated Component Matrix

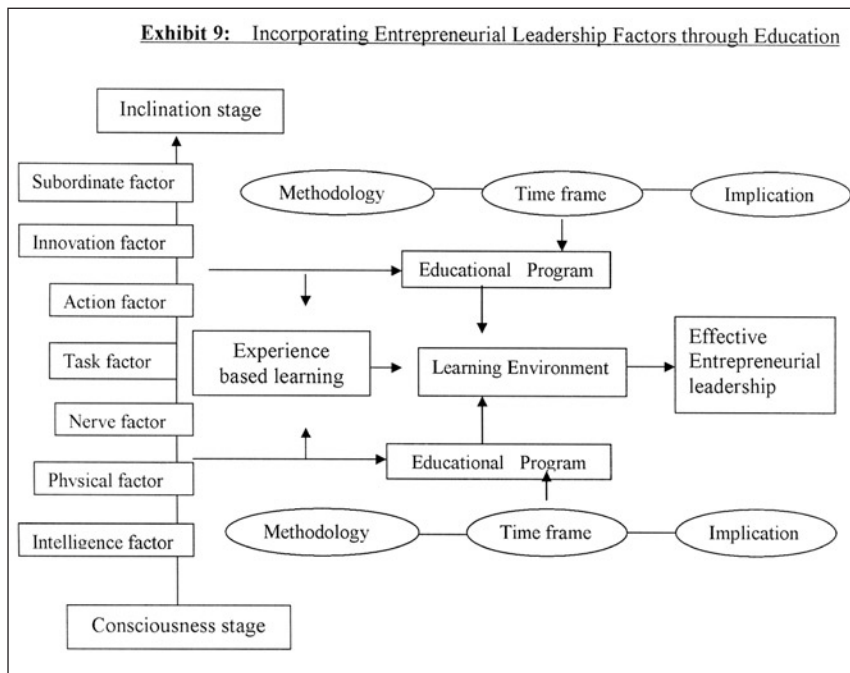
Variables	Components						
	1	2	3	4	5	6	7
V1 Physical Vitality and Stamina			.714				
V2 Action oriented Intelligence and Judgment		.605					
V3 Enthusiasm to Accept Responsibilities						.810	
V4 Self belief			.651				
V5 Thoughtful about associates	.612			-.339		-.316	
V6 Ability in Dealing with community at large		-.427					
V7 Capacity to Set Priorities		.685					
V8 Ability to Motivate	.509		-.327			.346	
V9 Courage and stability					.667		
V10 Capacity to Win and Hold Trust	.579						
V11 Ability to take risk					.798		
V12 Need to Achieve				.624			-.338
V13 Dominance and Assertiveness	.607						
V14 Adaptability and Flexibility of Approach				.747			
V15 Innovation							.867

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 12 iterations.

Exhibit 8: Categories Formed

S. No.	Traits	Categories formed
1	<ul style="list-style-type: none"> thoughtful about associates, ability to motivate, capacity to win and hold trust dominance and assertiveness 	Subordinate factor
2	<ul style="list-style-type: none"> action oriented intelligence and judgment capacity to set priorities 	Intelligence factor
3	<ul style="list-style-type: none"> physical vitality and stamina self belief 	Physical factor
4	<ul style="list-style-type: none"> need to achieve flexibility and adaptability 	Action factor
5	<ul style="list-style-type: none"> courage ability to take risk 	Nerve factor
6	<ul style="list-style-type: none"> enthusiasm to accept responsibility 	Task factor
7	<ul style="list-style-type: none"> innovation 	Innovation factor

Exhibit 9: Incorporating Entrepreneurial Leadership Factors through Education



Dr. Saif Siddiqui
 Associate Professor
 Institute of Management Studies
 (IMS-Ghaziabad)
 Lal Kuan , Ghaziabad-201009
 U.P., India
 drsaifsiddiqui@rediffmail.com