Finding the Causal Relationship between Self-Leadership Strategies, Academic Performance and Class Attendance Attitudes : Comparative Research between Korean and Indian Students

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Abstract

A number of organizations have had big interests in studies concerning leadership and in academic areas, in not only management but also psychology. Until now, leadership has been accentuated by managers or team leaders especially. Recently, however, the concept of self-leadership directing one's own activities through self-control or self-management is being focused on in practices and in academia.

This study is to investigate the influence between self-leadership strategies and learning performance in IT classes mediated by attitude of attendance focused on the social science students in two universities (Korea (121 samples) and India (106 samples)). And this research tried to compare difference between two university students. Research results can give us direction of task-taking attitudes in firms or learning attitudes in teaching organizations and implications to human resource managers who are in charge of improving learning performance or productivity.

Keywords : Self-leadership, Behavior-Focused Strategy, Constructive Thought Strategy, Leadership, Natural-Reward Strategy

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1. Introduction

Many organizations have required leadership being defined as the leading power of top managers, executive officers, or team leaders. Recently, self-leadership as individual leadership influencing personal outcomes is focused on in academia and industrial fields actively [Neck et al., 1995; Prussia et al., 1998]. Until now, in not only industries but also in academia, lots of research has been conducted concerning leadership in organizations. According to styles of leaderships, organizational cultures and nature, this may be different and productivity is also depended on these [Manz and Sims, 2001]. Thus, research about leadership and self-leadership are being performed in managerial area as well as industrial psychology, etc.

Researchers assumed that self-leadership strategies might influence the academic performance of learners who are in social sciences. Generally, they feel difficulty to take part in classes of engineering-based courses. This research was based on the previous studies that, in accordance with self-leadership strategies, a person makes a different action for accomplishment of difficult tasks with appropriate self-control and self-management [Dolbier et al., 2001, Manz and Sims, 2001; Prussia et al., 1998].

In this research, the subjects were students who have participated in engineering-based courses (database, e-business system development, computer security and management statistics.

This research progressed over two semesters (two phases). In the first phase, academic performance (100-score) as dependent variables and self-leadership strategies as predictors were the factors of the regression model. In the second phase, the research model was changed into that class attitudes as mediated variables were added between self-leadership and performance. And respondents were added also.

This research was to investigate the causal relationship between self-leadership strategies and learning attitudes, learning attitudes and learning performance. The major goal of research is to find out which self-leadership strategies and attitudes affect high performance in information technologies and statistics of management. Results of the research can be help to establish self-leadership strategies for which learning attitudes may be proper to improve academic achievement. Moreover, these can give us support for developing good methodologies toward academic performance.

2. Theoretical Background

2.1 Self-Leadership Strategies

Self-leadership can be defined as self-management competence driving thought and activities in the right direction. Self-leadership strategies are usually grouped into three categories of behavior-focused strategies, natural reward strategies, constructive thought strategies [Manz and Neck, 2004; Manz and Sims, 2001; Prussia et al., 1998].

Self-leadership influences self-dependence, self-pride, self-satisfaction for the given tasks or performing those, self-efficacy, creative and innovative thinking, etc [Manz and Sims, 2001; Prussia et al., 1998]. Especially, self-efficacy is

defined as expectation and belief that individuals are able to make an action properly in specific context.

Hypothesis 1(H1) : Self-leadership strategies influence establishing future vision positively.

Hypothesis 2(H2) : Self-leadership strategies influence self-efforts positively.

Hypothesis 3(H3) : Self-leadership strategies influence preparation of class positively.

(1) Natural Reward Strategy

Natural reward strategies are intended to make situations that a person is rewarded and motivated by an enjoyable aspect of specific task or behavior [Manz and Neck, 2004; Manz and Sims, 2001]. In other words, natural reward strategies include two primary strategies. First, throughout the performing of tasks, the task itself will be the natural reward by the additional of pleasant and enjoyable moments. Second, a person has no interest in unpleasant tasks and expects inherent reward for the tasks. This is a mechanism for motivating a person inherently with linking self-determination and competence [Deci and Ryan, 1985].

Hypothesis 1-1(H1-1) : Natural reward strategies influence establishing future vision positively.

Hypothesis 2-1(H2-1) : Natural reward strategies influence self-efforts positively.

Hypothesis 3-1(H3-1) : Natural reward strategies influence preparation of class positively.

(2) Behavior Focused Strategy

One of the self-management strategies, one who focuses on the behavior-oriented strategy willingly carries out their duties, even if it is not a pleasant task. Namely, it is a strategy that promotes a level of self-awareness to manage own behaviors right way [Manz and Neck, 2004]. In behavior focused strategy, the elements such as self-observation, self-goal setting, self-reward, self-punishment and self-cueing.

Self-observation is a behavior that increases self-awareness level concerning time and reason absorbing specific activities [Mahoney and Arnkoff, 1978; Mahoney and Arnkoff, 1979; Manz and Neck, 2004, Manz and Sims, 1980]. Self-reward means that one can do their best for self-goal settings and goal accomplishment. Self-punishment and self-feedback are an effort to rearrange unwanted activities or failure to right direction and try to introspect [Mahoney and Arnkoff, 1978; Mahoney and Arnkoff, 1979; Manz and Neck, 2004; Manz and Sims, 1980].

Hypothesis 1-2(H1-2) : Behavior-oriented strategies influence establishing future vision positively.

Hypothesis 2-2(H2-2) : Behavior-oriented strategies influence self-efforts positively.

Hypothesis 3-2(H3-2) : Behavior-oriented strategies influence preparation of class positively.

(3) Constructive Thought Strategy

Constructive thought is a strategy driving habit of positive and right thought that affects outcomes positively [Manz and Neck, 2004; Neck and Houghton, 2006; Neck and Manz, 1992]. Constructive thought translates an irrational way or negative assumption of belief into self-talk or spiritual mind-set [Burns, 1980; Ellis, 1977; Manz and Sims, 2001; Seligman, 1991]. Also, it

translates destructive and non-positive self-talk into more positive internal conversation [Seligman, 1991]. Consequently, this means that the personal who thinks about specific tasks positively and constructively can get higher outcomes.

Hypothesis 1-3(H1-3) : Constructive thinking strategies influence establishing future vision positively.

Hypothesis 2-3(H2-3) : Constructive thinking strategies influence self-efforts positively.

Hypothesis 3-3(H3-3) : Constructive thinking strategies influence preparation of class positively.

2.2 Self-Leadership and Performance

Many previous researches suggested that self-leadership of members can influence performances of organization [Neck et al., 1995; Prussia et al., 1998]. In general, to maximize productivity and task outcome is critical interest of the majority of organizations, especially firms. Commonly, firms have a few issues such as decline of productivity, dissatisfaction of tasks, and high turnover rate, etc. Firms make an effort to solve these issues [Cummings and Malloy, 1977]. For these problems, Hackman [1986] had suggested that the self-managed work group is important concept [Hackman, 1986].

Hypothesis 4(H4) : Definitive future vision influences academic performance positively.

Hypothesis 5(H5) : Self-effort influences academic performance positively.

Hypothesis 6(H6) : Preparation of class influences academic performance positively.

Members in a group have to set their goals for accomplishing organizational goals. And they should do their best to manage themselves to achieve personal goals. Thus, recently, lots of studies concerning the self-leadership, the free will that motivate and control of themselves to attain goals affects the performance, have been progressed actively. Therefore, self-leadership means self-management capabilities that control thought and activities by himself to right direction [Manz, 1985].

Hypothesis 7(H7) : Self-leadership strategies influence academic performance positively.

Hypothesis 7-1(H7-1) : Natural reward strategies influence academic performance positively.

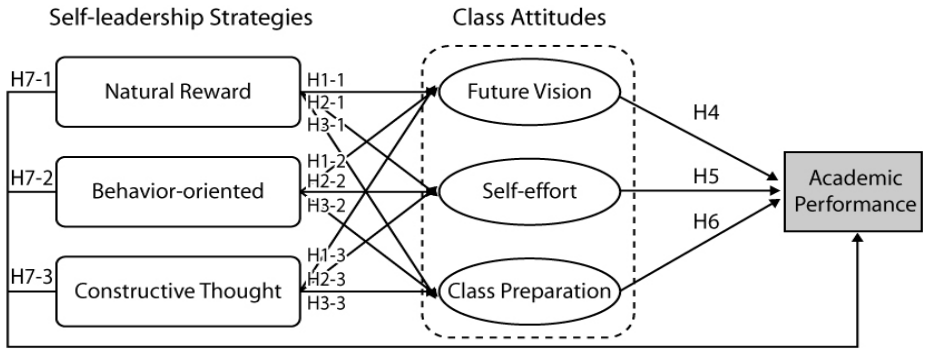
Hypothesis 7-2(H7-2) : Behavior-oriented strategies influence academic performance positively.

Hypothesis 7-3(H7-3) : Constructive thinking strategies influence academic performance positively.

3. Research Methods

3.1 Research Model

The research model on the basis of hypotheses was suggested in <Figure 1>. Predictors were three self-leadership strategies (natural reward, behavior-focused and constructive thought strategy). Class participation attitudes were future vision, self-effort, and class preparation as mediation variables. Academic performance that averaged score of four lectures related to information technology (database, computer security, e-Business system development and management statistics). In India, respondents were 106 students of a class in an university.



〈Figure 1〉 Research Model

〈Table 1〉 Self-Leadership Measures (Questionnaire)

	Contents
1	Before taking up a subject, I try to check and confirm whether I am ready within to do the task.
2	I take notes in a memo so that I may not forget.
3	I set goals and work eagerly to accomplish it.
4	If I am satisfied with results of my tasks, I praise myself.
5	Before taking up an important task, I make an attempt to practice in advance.
6	In the process of working, I keep a check of my capability.
7	While studying, I keep things around me which will help me concentrate.
8	I am determined to accomplish the goal which I set up for myself.
9	After successfully achieving my goal, I reward myself with things that delight me.
10	Before starting an important task, I practice it in my mind.
11	While studying, I check the schedule of task several times.
12	Before taking up important task, I consult with others for advice.
13	I like making plan for studying and follow accordingly.
14	If I do well in my examination, I reward myself by doing things which pleases me.
15	Before taking up my subject, I always practice in advance.
16	I know the most interesting point in a given subject.
17	I try to do my task in my favorite place.
18	I try to find enjoyable topics in my study.
19	I think advantages of my task more than disadvantages to these.
20	I think the pleasure derived in the process of studying is more important than the result.
21	I know my favorite topics in my study.
22	While studying, I try to clean my studying place.
23	I enjoy doing those works which delights me.
24	While taking up any subject, I focus on the merits more than the demerits.
25	I focus more on the process of study rather than the result.
26	I can speak about my favorite topic in study confidently.
27	If possible, I would like to study at a time when I feel comfortable.
28	I try to find the method how to work with pleasure.
29	I focus more on good things of studying than bad things.
30	I consider the pleasure of working more than the compensation it would give.
31	I have a clear vision about my future.
32	I am quite sure that I made every effort to understand the lectures covered in this semester.
33	I think I well prepared for the class and also participated in the class.

3.2 Research Methodology

To test these hypotheses, research was conducted through the questionnaire survey and selected with respondents who take IT system development, database, computer security and statistics for management courses in Korea. In India, students from three classes had been chosen as respondents.

3.3 Measures

To identify self-leadership strategies, questionnaires consist of 30 items by referring to previous literatures. Almost all of the items were based on Manz [1985]'s research suggestion and modified for improving understand ability of respondents [Manz, 1985]. The response of each questionnaire as checked on the Likert five-point scale from strongly disagree (= 1) to strongly agree (= 5). Also, for measuring class attitudes, modified three items of indicators of lecture evaluation were used.

4. Data Analysis and Results

This section addresses the data analysis results. We will discuss the validation test, which was conducted to ensure the reliability of the instruments, as well as the results of statistical analysis in relation to our research hypotheses. The data were subjected to a confirmatory factor analysis using the AMOS 7.0 structural equation modeling software.

4.1 Instrument Validity

Content Validity : Content validity is a measure of how comprehensively a measurement instrument reflects a theoretical construct. As this instrument was adopted from the recent study conducted by Park and Park [2011], the content validity was established in this study.

Reliability : Reliability is the consistency and dependability of a measurement instrument. In short, reliability is the extent to which a respondent would answer the same question in the same way [Neuman and Kreuger, 2003]. Internal reliability was evaluated via the calculation of Cronbach's alpha values. Cronbach's alpha measures how well a set of items measures a single one-dimensional latent construct. Values in excess of 0.7 are indicative of high inter-item correlation and are generally preferred, but values in excess of 0.5 are regarded as acceptable [Nunnally, 1967]. According to <Table 2>, all constructs evidence alpha values in excess of 0.5, thus demonstrating the reliability of the scales employed in this study.

Construct Validity : Construct validity was evaluated to determine whether or not the "measures chosen are true constructs describing the event." Thus, a confirmatory factor analysis was performed. Items whose loadings were low as compared to the majority of other items of the same construct, or items with loadings of less than the acceptable threshold of 0.4 [Hair et al.] were removed. <Table 2> provides the principal components factor analysis results of both Korea and India, which evidence satisfactory loading outcomes.

Convergent validity can also be evaluated by determining whether the item loadings were in excess of 0.5 on their associated constructs except No. 21 item of India [Wixom and Watson,

〈Table 2〉 Component Factor Analysis and Reliability

Country	Items	Factor			Cronbach Alpha
		NR*	CT*	BF*	
Korea	26. I can speak about my favorite topic in study confidently	.761			.665
	21. I know my favorite topics in my study.	.724			
	27. If possible, I would like to study at a time when I feel comfortable.	.648			
	28. I try to find the method how to work with pleasure.	.634			
	20. I think the pleasure derived in the process of studying is more important than the result.		.765		.784
	30. I consider the pleasure of working more than the compensation it would give.		.746		
	25. I focus more on the process of study rather than the result.		.734		
	29. I focus more on good things of studying than bad things.		.724		
	19. I think advantages of my task more than disadvantages to these.		.641		
	11. While studying, I check the schedule of task several times.			.782	.712
	1. Before taking up a subject, I try to check and confirm whether I am ready within to do the task.			.705	
	6. In the process of working, I keep a check of my performance.			.689	
	10. Before starting an important task, I practice it in my mind.			.664	
India	27. If possible, I would like to study at a time when I feel comfortable.	.826			.667
	28. I try to find the method how to work with pleasure.	.777			
	26. I can speak about my favorite topic in study confidently	.539			
	21. I know my favorite topics in my study.	..454			
	25. I focus more on the process of study rather than the result.		.781		.752
	20. I think the pleasure derived in the process of studying is more important than the result.		.731		
	30. I consider the pleasure of working more than the compensation it would give.		.636		
	19. I think advantages of my task more than disadvantages to these.		.629		
	29. I focus more on good things of studying than bad things.		.576		
	1. Before taking up a subject, I try to check and confirm whether I am ready within to do the task.			.803	.649
	11. While studying, I check the schedule of task several times.			.735	
	6. In the process of working, I keep a check of my performance.			.611	
	10. Before starting an important task, I practice it in my mind.			.501	

2001]. Once again, we can see that the loadings are above the threshold of 0.5 (see <Table 2>). Discriminant validity examines the extent to which the measures of each construct distinctly differ from one another. This can be evaluated by comparing the correlation between constructs and each respective AVE [Fornell and Larcker, 1981]. The square root of each construct's AVE should be greater than the correlation between it and another construct. This is apparent in <Table 3> and <Table 4>, which indicate high discriminant validity.

〈Table 3〉 Correlation between Constructs (Korea)

	NR	CT	BF	FV	SE	CP	AP
NR	1						
CT	.250**	1					
BF	.224*	.295**	1				
FV	.371**	.336**	.159	1			
SE	.022	.321**	.306**	.159	1		
CP	.087	.164	.160	.245**	.624**	1	
AP	-.090	-.119	.210*	-.231*	.244**	.112	1

주) *p < .05, **p < .01.

〈Table 4〉 Correlation between Constructs (India)

	NR	CT	BF	FV	SE	CP	AP
NR	1						
CT	.444**	1					
BF	.213*	.253*	1				
FV	.357**	.435**	.411**	1			
SE	.107	.194	.227*	.205	1		
CP	.217*	.159	.162	.345**	.404**	1	
AP	.142	-.043	.021	.025	.001	.046	1

주) *p < .05, **p < .01.

4.2 Testing the Structural Model

The following are the overall model fit and the tests of each research hypotheses in <Table 5>. As shown, the results of the full model indicated fit indices : x^2 = 247.526, df = 108, CFI = .871, TLI = .80, RMSEA = 0.79. The adequacy of the structural equation models was evaluated

〈Table 5〉 Fit Indices for Structural Model

	x^2	df	CFI	TLI	RMSEA
Indices	247.4	108	.871	.80	.079
Recommended value			≥ 0.90	≥ 0.90	≤ 0.10

on the criteria of overall fit with the data.

Next, we evaluated the individual paths of the model. These results are summarized in <Table 6> and <Table 7>. And the following <Figure 2> and <Figure 3> are a path figure showing the AMOS analysis result of the research model suggested in this study.

In Korea cases, academic performance is predicted by future vision (β = -.229) and self effort (β = .258). Future vision is predicted by natural reward (β = .641), constructive thought (β = .495). Self effort is predicted by constructive thought (β = .555) and Behavior-oriented focused (β = .708). Class preparation is predicted by Behavior-oriented focused (β = .523).

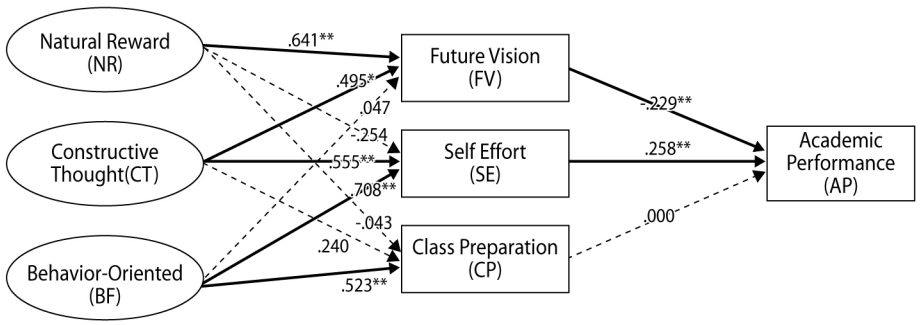
In India cases, academic performance and class preparation are not predicted by any constructs. Future vision is predicted by natural reward (β = 2.785), Behavior-oriented focused (β = .646). Self effort is predicted by Natural Reward (β = 3.528).

〈Table 6〉 Regression Weights (Korea)

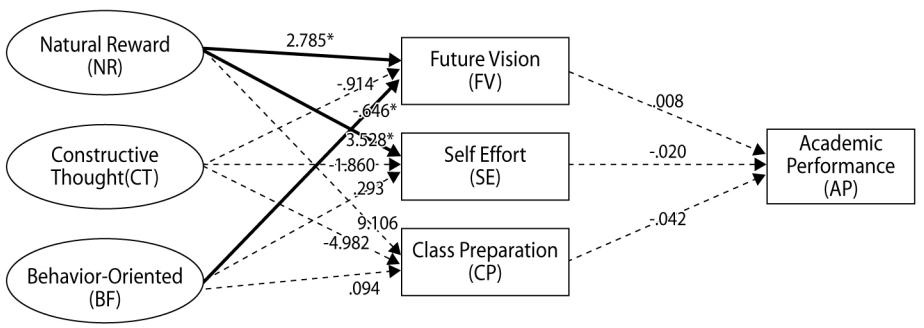
Hypotheses	Estimate	S.E.	C.R.	P	Results
H1-3 : FV ← CT	.495	.253	1.954	**.051***	**Supported**
H2-3 : SE ← CT	.555	.244	2.274	**.023****	**Supported**
H3-3 : CP ← CT	.295	.251	1.174	.240	Not supported
H1-1 : FV ← NR	.641	.207	3.091	**.002****	**Supported**
H2-1 : SE ← NR	-.254	.182	-1.392	.164	Not supported
H3-1 : CP ← NR	-.043	.194	-.224	.823	Not supported
H1-2 : CP ← BF	.523	.258	2.024	**.043****	**Supported**
H2-2 : SE ← BF	.708	.249	2.845	**.004****	**Supported**
H2-2 : FV ← BF	.047	.241	.194	.846	Not supported
H4 : AP ← FV	-.229	.072	-3.160	**.002****	**Supported**
H5 : AP ← SE	.258	.079	3.260	**.001****	**Supported**
H6 : AP ← CP		.076	.999	**.000*****	**Supported**

〈Table 7〉 Regression Weights (India)

Hypotheses	Estimate	S.E.	C.R.	P	Results
H1-3 : FV ← CT	-.914	.947	-.965	.334	Not supported
H2-3 : SE ← CT	-1.860	1.132	-1.644	.100	Not supported
H3-3 : CP ← CT	-4.982	4.109	-1.212	.225	Not supported
H1-1 : FV ← NR	2.785	1.680	1.658	**.097***	**Supported**
H2-1 : SE ← NR	3.528	1.985	1.777	**.076***	**Supported**
H3-1 : CP ← NR	9.106	7.188	1.267	.205	Not supported
H1-2 : CP ← BF	.094	.922	.102	.919	Not supported
H2-2 : SE ← BF	.293	.410	.716	.474	Not supported
H2-2 : FV ← BF	.646	.368	1.757	**.079***	**Supported**
H4 : AP ← FV	.008	.081	.103	.918	Not supported
H5 : AP ← SE	-.020	.104	-.192	.848	Not supported
H6 : AP ← CP	.042	.097	.432	.666	Not supported



〈Figure 2〉 Results of AMOS (Korea)



〈Figure 3〉 Results of AMOS (India)

5. Conclusion and Limitation

This research was to investigate the causal relationship between self-leadership strategies and learning attitudes, learning attitudes and academic performance. Namely, purpose of research is to find out which self-leadership strategies and attitudes affect high performance in classes of information technology and statistics of management. Results of the research can help to establish self-leadership strategies for which learning attitudes may improve academic achievement.

Moreover, these can give us implications for trying to develop better methodologies for improving academic performance. All of the subjects were university students in social sciences taking courses such as system design and development, database implementation, or management statistics in the digital business department. In general, they feel difficulty during a semester in these courses.

As a result of empirical analysis, first, the respondents of Korea who are in natural reward or constructive thought strategy have definitive future vision of class attitudes. Second, learners making an effort by themselves show a tendency to think constructively and do behavior-oriented strategy. Namely, even though the level of difficulty may be high, by positive self-talk and self-goal setting etc., respondents usually make an effort to get high academic performance. Third, the behavior-oriented students are apt to prepare their class sincerely. On the contrary, in case of Indian students, respondents who are in natural reward strategy establish their own future vision and make self-effort positively. And the behavior-oriented strategy also affects to establish future vision positively.

Concerning the causal relationships between class attitudes and academic performance, first, Korean respondents who have the clear future vision showed academic performance negatively. This result shows the contrary that the definitive future vision influences performance positively. More detailed tools to evaluate the future vision such as profession or ultimate goal of life should be developed and studied at the next phase. Second, during a semester, the self-effort affects academic performance positively. Therefore the importance of self-effort should be emphasized to learners. On the basis of the research result, we can get crucial clues to develop self-leadership enhancement program for early or middle 20's with low self-efficacy. In case of Indian students, however, respondents showed class attitudes have no causal relations with academic performance.

This research has the following limitations. First, respondents were sampled from a department in a university in Korea and India each. Therefore, the research used limited and narrow samples for empirical study that are in social science areas only. Second, future vision, class preparation, and self-effort as measures to evaluate class attitude were suggested with only one item in a questionnaire. It is necessary that more detailed question items be developed for the next research phase. Third, for comparative research, research in this phase cannot be able to suggest the reason why differences between the two countries were.

Further research to overcome research limitations and improve reliability and generality of results has to expand sample scope to not only social science but also engineering, art and natural science area, etc. Also, there may be meaningful research results if the next research investigates difference among local universities. Additionally, research will be preceded to investigate learners in universities as well as employees in firms to find out causal relationships between working attitudes and personal performance.

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