

Application of Leadership Theories in Analyzing the Effects of Leadership Styles on Productivity in Philippine Higher Education Institutions

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Abstract –The type of leadership exemplified in educational organizations has a significant role to play in organizational success or failure. Using a correlational research design, we investigated the effects of leadership behaviors exhibited by leaders in various higher education institutions in the country (as perceived by 14 Filipino graduate scholars) on productivity (measured in terms of passing rates in board examinations in 2016). Results showed that the presence of more leadership behaviors (concerned with both productivity and people) are strongly associated with greater organizational productivity, while leader-follower relationships and productivity did not show significant association. The educational leader's people and task orientations were established to have complementary roles in predicting school productivity. The data derived from this study also showed consistent patterns with respect to the underlying relationships proposed by various trait and behavioral theories of leadership and through the application of the Leadership Grid.

Keywords –higher education, LBDQ, leadership grid, LMX, productivity.

INTRODUCTION

Why are leaders important? Why do some organizations fail while others succeed, even thriving to exist for more than a century? Is there such a thing as effective leadership style or behavior? The activities that a person does and what he/she says to achieve his goal are what is viewed as behavior. Human behaviors are affected by various stimuli. In an organization, the success of individual careers and the success of the team are often based on how effectively leaders behave. In school, student's learning and behavior are also influenced by the teacher's attitudes and the learning environment. As such that it is important to be aware of the factors that affect student learning to reinforce activities and their interests. The same holds true in an organization in that the effective leader must know how to inspire followers and influence them to go beyond mediocrity by achieving the goals with delight. The manager's attitudes and treatment of employees may in turn determine the followers' behavior and performance.

In the late 1940s, most of the leadership research had changed from trait theory to behavioral theory even though both theories attempted to find the only best leadership style that fits every situation [1]. Behavioral theorists posit that a leader's behavior is the best predictor of his leadership influences; that is, the best determinant of his or her leadership success. There were two important leadership behavioral studies done in the past—one conducted by the Ohio State University researchers in the 1940's (establishing the task-oriented versus people-oriented leadership types) and the other one done by University of Michigan researchers in 1950's under the supervision of Dr. Rensis Likert, a psychologist. In the Ohio State University study, Dr. Carroll L. Shartle and associates developed a list of questions about leadership style, and this is what we now call as the Leaders Behavior Description Questionnaire (LBDQ). In the LBDQ, items describe how a leader specifically behaves, forming a technique where group members may describe their leader in the organization. But later in the late 1960s, it seems clear that there cannot be one best leadership style applicable

in all situations. The leadership paradigms changed—different leadership styles must be adapted by managers for different situations to formulate appropriate and effective organizational decisions; hence, the emergence of contingency leadership theory.

Good or effective leadership is in part due to good relationships between leaders and followers [1]. For the past 25 years, relationship-based studies have been done to develop leadership theories that could explain and predict organizational performance as a result of leader-follower relations. This unique relationship between a leader and follower is called a dyad. The focus of dyadic theories is on the development and effects of dyadic relationships. The notion of “support for self-worth” that leaders provide to followers is the central theme in dyadic leadership as well as the return performance that followers provide to leaders. There are four stages of approaches in a dyadic leadership, according to Lussier and Achua[1], as follows: vertical dyadic linkage theory (VDL), the leader-member exchange theory (LMX), team building, and systems and networks theory. The awareness of a relationship between a leader and a follower, not between a leader and a group of followers, refers to the first stage (VDL). The second stage (LMX) refers to the quality of the relationship between the leader and the follower which is an important determinant of how each follower are treated. The third stage is a team concept rather than as a dyad which refers to team building that explores the relationship between the leader and the followers. Lastly, the fourth stage involves multiple levels and structural units within the organization that examines relationships at a much broader scale. It pertains to systems and networks within the organization.

The present study focused on the second stage of the dyadic relationship which is the LMX. It is known to affect the productivity and satisfaction of employees as well as their work ethics and perceptions; hence, the use of LMX questionnaire. It is believed that followers tend to reciprocate their leader’s trust and liking by loyalty and excellent performance. So, here, it can be seen that leaders interact with their followers in different degrees. Followers with strong social ties to the leader belong to the “in-group” and have high LMX, while those with low LMX belong to the “out-group” and have weak social ties to the leader. Hence, being a member of the in-group puts the follower in a very favorable position. And during evaluation in the organization, a more positive ratings are given by in-group followers than out-group followers. This is another way of predicting the performance of followers. Through the quality of

social exchanges between the leader and follower or as proposed by the LMX theory, examining organizational leadership would be more predictive of performance of followers than behaviors and traits of superiors.

There are terms used in this paper that need to be defined in order to guide the reader in understanding the concepts used in the context of this study. The following are the operational definitions of the terminologies:

Board performance refers to the overall passing rate of the institution during the board licensure examination for a certain profession in a given year as certified by the Professional Regulation Commission (PRC) of the Philippines.

Graduate scholars are Commission on Higher Education (CHED) scholars who are currently employed in private or public higher education institutions in the Philippines and are enrolled in master’s or doctoral programs in other universities in the country which are identified by CHED as centers of excellence for development.

Higher education institutions (HEIs) are the Philippine colleges or universities offering various degree or academic programs whose professional certifications are regulated by the PRC.

Leadership refers to the process of directing and influencing the task-related activities of an organization. Leadership behaviors are the set of practices of leaders that serves as predictor of his or her leadership success. Leadership style refers to the behavioral pattern or approach of the leader to provide direction to or influence on his followers in order to achieve a certain task or goal. Leadership theory is an application of some aspect of leadership that is used to better understand, predict, and control the success of a leader. School refers to the private or public higher education institutions (HEIs) in the Philippines and are referred to here as the sending HEIs of the CHED scholars.

School productivity refers to how well the school is performing, defined here in terms of board passing rates or performance, and how effectively the leadership played his or her part for its success.

The original form of the LBDQ was constructed by Hemphill and Coons [2]. Halpin and Winer[3] then adapted the questionnaire in an Air Force study and identified initiating structure and consideration as two fundamental dimensions of fifty-two (52) aircraft commanders’ behavior. Factor analysis was used to analyze the responses of 300 crew members that described the behavior of their commanders. Based on the "Manual for the Leader Behavior Description

Questionnaire", the assessment revealed that Initiating Structure and Consideration accounted for approximately 34 to 50 per cent, respectively, of the common variance. In a subsequent study based upon a sample of 249 aircraft commanders, the correlation between the scores on the two dimensions was found to be .38. Initiating Structure refers to the leader's behavior in delineating the relationship between himself and the members of his group, and in endeavoring to establish well-defined patterns of organization, channels of communication, and ways of getting the job done. Consideration refers to behavior indicative of friendship, mutual trust, respect, and warmth in relationship between the leader and members of the group.

Blake and Mouton [4] conducted a research study of a before-and-after 10-year period that measured productivity. In the study, an extensive "Grid Organizational Development" program was used for the experimental company which was designed to teach how to be team leaders. This is also called today as the sound style that encourages teamwork and commitment. Another matched company was also used in the study as the control group that did not use the program. The experimental group had higher profit that is four times more than the control group, leading to the conclusion that team leadership usually results in improved performance, low absenteeism and turnover, and high employee satisfaction [1][4]. The researchers therefore supported the (9,9) grid coordinates or the high commitment-high people concern leadership style as universal theory. However, a meta-analysis of prior studies was done later and found that there is a weak correlation between commitment to task and concern for people even if the two tend to have positive correlation. So, it was concluded that the high-high style of leadership cannot be accepted as universal and the best one style that applies to any situation.

OBJECTIVES OF THE STUDY

The association of leadership behavior or style to school productivity and institutional board performance was the concern of this study. Literature and several studies agree that without leadership employees would be lost, leading to a chaotic work environment. Without motivation in the context of good dyadic relationship, employees may fail to perform to the best of their ability. But if there is effective leadership skills and good dyadic relationship, the employees and the company will be on their way to success and productivity, even when in a diverse culture. The

LBDQ and LMX questionnaires were used in this study to assess the effects of leadership style on the organization's productivity as well the applications of the different leadership theories in analyzing the research outcomes or the data gathered.

MATERIALS AND METHODS

Design

This study employed correlational, causal, and descriptive research designs. Correlational design aims to determine the significant linear association between two variables: leadership experience and school productivity. But neither one variable causes the other. Causal research design tries to explain the cause-and-effect relationship between two variables; that is, leadership experience has an effect on school productivity. Furthermore, descriptive design is used to describe the characteristic of the population sample under investigation. In this study, we only describe the available data from sample as they relate to the existing theories of leadership.

Participants

Participants of this study were twenty-nine (29) CHED scholars who are currently employed in private or public higher education institutions (HEI) in the Philippines (referred to here as sending HEIs) and are now enrolled as master's or doctoral students in other universities in the country (also called as delivering HEIs), which are identified by CHED as centers of excellence or development. Of these respondents 58.6% were female and 41.4% were male. The average age is 35, where 25 is the youngest and 54 is the oldest. They have been teaching in the SHEI for an average of 10 years, where the minimum number of years in service is 2 and the maximum is 25. Most of them are permanently employed (72.4%), contractuels (20.7%), and the rest are working part-time or as temporary. There is high proportion of participants who are teaching board courses in different fields (72.4%), of which 34.5% are connected to teacher education courses. Other board courses in which these scholars are involved include agriculture, psychology, accountancy, and nursing. From this original number of participants, the researchers drew an actual sample of 14 scholars using the following criteria: 1) the respondent must be teaching in at least one board course; and 2) the respondent's institution must be found in the list of schools participating in the annual licensure examinations for different professionals (particularly in

the years 2016 and 2017), results of which are accessible in the PRC website (www.prc.gov.ph).

Instruments

To measure the leadership behaviors and leader-follower relationships, we used the Leadership Behavior Description Questionnaire (LBDQ) and Leader-Member Exchange Scale (LMX 7) questionnaire. LBDQ, originally validated by Schriesheim and Kerr [5], provides a technique by which organizational members can describe the leadership behaviors of an identified immediate leader. In this study, we used only a concise version of the LBDQ with 20 items. Each item in the LBDQ asks about the specific way in which a leader may desirably behave. The task of the respondent is to indicate the presence or absence of each behavior, for which he/she is expected to obtain a total score of at most 20. The higher the total score, the more likely the leader behaves in a way gainful to the organization's productivity. Furthermore, the reliability of the LBDQ is high for this study as evidenced by the large value of the Cronbach alpha, which is 0.903.

On the other hand, LMX 7, which was developed by Graen and Uhl-Bien [6], contains seven (7) items that ask the respondent to describe his/her relationship with either his/her leader or one of his/her subordinates by indicating the degree to which the item statements are true based on the experience of the respondent. Each response category has a corresponding integer value ranging from 1 to 5, where 1 is of the lowest degree and 5 is of the highest degree. For this study, we let the respondents assess the quality of his/her relationship with an immediate supervisor, dean, or chairman. The respondent is expected to have a total score of at most 35. Total scores in the upper ranges are interpreted as indicators of stronger, higher-quality leader-member exchanges (e.g., in-group members), while total scores in the lower ranges are indicators that exchanges are of lesser quality (e.g., out-group members). Moreover, in this study the estimated reliability for the LMX is high (Cronbach's alpha = 0.886).

Data Gathering

The researchers used Google Forms as platform for designing and distributing the LBDQ and LMX questionnaires. In this platform, we included some sections with items on the socio-demographic profiles of the respondent, such as the optional name of respondent and the required information about the respondent's gender, age, complete name of the SHEI, number of years in teaching in the SHEI, employment

status, whether he/she teaches board courses or not, and the specific field/board courses he/she is connected to (e.g., education, agriculture, etc.). The other sections include the electronic versions of the LBDQ and LMX in which the respondents were tasked to click on boxes or bullets which correspond to their intended response or true experiences/ perceptions about the items. The link of the electronic questionnaire was shared to the group of CHED scholars in Facebook. After a week of accepting responses, we obtained a total of 29 respondents from various HEIs in the country. The Google Forms platform enables the researchers to view the results at real-time, with automatic presentation of graphs, which can be converted into tabular form via Microsoft Excel format. The spreadsheet containing the responses was then downloaded, and the qualitative response cells were replaced with their numerical equivalents as found in the original questionnaires.

To obtain quantitative measures for school productivity, the researchers used the data from the regular releases of results of board examinations conducted by the PRC (e.g., Board Licensure Examinations for Professional Teachers (BLEPT), Licensure Examinations for Agriculturists (LEA), etc.). Board examination results in terms of passing rates are direct measures of school performance, and hence organizational productivity. In the school effectiveness framework developed by Scheerens [7], school outputs such as graduates' achievement or performance in examinations are indicators of organizational effectiveness, and thus this measure of educational quality can be used as a proxy measure of productivity. Using the complete names of SHEI provided by the respondents, the researchers were able to gather information about the overall passing rates of the SHEIs in the years 2016 and 2017. (Note: We used only two time periods, 2016 and 2017, since the minimum number of years of school served by the respondents is 2.) In case the SHEI had many campuses, the mean of the passing rates was obtained and used as single value for analysis. Furthermore, since there are two licensure examinations for both teachers and agriculturists in one year, we opted to use only the results of the examination conducted after the last graduation of the cohort of first-time takers and within the first semester of the current school year at that time. Finally, for the two results of teacher licensure exams (elementary and secondary), we only chose the data from elementary level because, in the secondary level, examinees may not be coming from the same cohort (as graduates from other colleges or fields—engineering, nursing, agriculture, etc.—are

allowed to take the licensure exams for secondary level provided that they have earned units in professional education subjects). In other words, using the exam results from the elementary level is a more valid and reliable option than using the exam results from the secondary level.

Data Analysis

To determine the strength of linear association between leadership behavior and relationships and school productivity, we used the Pearson product-moment correlation as analytical tool. At a given level of significance (5% in this case), this statistic can test the research hypotheses: whether or not to reject the first hypothesis that there is no significant linear association that exists between leadership behavior (using LBD as measures) and school productivity (using board passing rates as measures); and similarly, the second hypothesis that there is no significant linear association between leader-follower relationships (using LMX as measures) and school productivity (using board passing rates as measures).

To establish the causal relationship between leadership behavior and relationships (independent variables LBD and LMX) and school productivity (dependent variable PROD), we used linear regression. This analytical procedure allows us to summarize and study relationships between the two variables in the form of a linear equation, which can be used (if significant coefficient exists) to predict values of the dependent variable given specific values of the independent variables. Using this procedure demands that the data distributions are approximately normal and that the measures are of at least interval level. These conditions are in fact satisfied by the properties of the data at hand, as the quantile-quantile plot resembled a straight line.

Since we had suspected that the two independent variables might violate the non-collinearity assumption, we implemented a stepwise regression. In this procedure, redundant variables are eliminated and some explanatory variables whose coefficients are not significant at a certain level are discarded from the original regression model, producing a parsimonious model but with compromised fit to the data. These statistical procedures, including the tests for internal consistency of instruments, were implemented using the computer software IBM® SPSS® version 20.

RESULTS AND DISCUSSION

In this section, the researchers present three results

of the analyses: first, the association between LBD and board performance together with the association between LMX and board performance; the effect of LBD and LMX on board performance; and lastly, the application of theories in analyzing the data derived from leadership behavior descriptions.

Relationship between Leadership Experience and School Productivity

Leadership experience is a collective term to refer to the individual's experience associated with the leadership behaviors exemplified by his/her immediate supervisor, dean, or head of office and the his/her personal relationships or encounters with the leader in the past. Using the measures derived from the responses to LBD and LMX, we obtained quantitative estimates of this latent variable or trait. On the other hand, school productivity was estimated using the overall passing rates of HEIs in professional board examinations. These quantitative measures and rates were analyzed for some degree of linear association among them. Table 1 summarizes the intercorrelations among the variables.

Table 1. Intercorrelations among measures derived from LBDQ and LMX and board passing rates in 2016 and 2017

	LBD	LMX
LBD		
LMX	0.650*	
Passing Rate (Year 2016)	0.542*	0.326
Passing Rate (Year 2017)	0.148	0.052

* $p < 0.05$

The researchers can note that the LBD is significantly associated with both the LMX and the 2016 passing rate, while LMX is not associated with any of the passing rates. This means that there is sufficient evidence that LBD scores are linearly correlated with board passing rates. In other words, the more leadership behaviors in the LBDQ are present in the leader, the higher the institutional performance in board examinations. Therefore, we rejected the null hypothesis that no significant relationship exists between leadership behavior and school productivity and accepted the null hypothesis that leader-member relationships are not linearly related to school productivity. It is also interesting to note that while 2016 board performance was related to the leadership behavior descriptions, the 2017 board performance showed a weak relationship. One possible explanation for this inconsistency is that the perceived behaviors by

the scholars (faculty members) about their leaders are true only to the time when they left the SHEI for their graduate scholarship (i.e., two years ago). And the results of the licensure exams were probably influenced by the type of leadership during that time that the faculty members experienced and recalled. The later results (i.e., 2017 PRC results) were probably influenced by another type of leadership as there might be changes in leadership that occurred after the faculty's study leave had commenced.

This significant relationship attests to the importance of leadership in improving organizational performance. The items contained in the LBDQ represent the behaviors that the leaders have toward the college faculty members (CHED scholars), which are focused on getting the tasks done and on meeting people's needs and developing relationships. These leadership styles that educational leaders execute in dealing with faculty members are preconditions to or intervening factors for developing healthy working environment and relationships. A study found that leader support, proposed to be a key feature of the work environment for creativity, was positively related to the peer-rated creativity of subordinates working on creative projects in seven different companies [8]. In another study, it was found out that leader relational behaviors are positively related to bonding social capital, resulting to the development of feelings of vigor, which are positively associated with manager ratings of employee job performance [9].

The weak relationship between LMX and overall school productivity is a remarkable result, because it was assumed that individual leader-member exchanges influence higher levels of leadership (i.e., group and organizational). Several studies showed that high LMX is associated with increased individual job satisfaction, organizational commitment, and performance [10] [11] [12]. However, the findings of Liden, Erdogan, Wayne and Sparrowe [13], that at the group level, there was not a main effect for LMX differentiation on group performance. Does this imply that LMX is effective only in improving productivity at the individual level of performance? Hence, further research may be conducted to resolve some inconsistencies or issues in this area.

Effect of Leadership Behaviors on School Productivity

Using the above results, we show that only the 2016 board performance was correlated with the one of the independent variables (i.e., LBD) and that these

variables are the only candidates for our search for a causation model. Given that LMX and LBD are also highly correlated, there is a high likelihood that we used redundant independent variables or that we violated the non-collinearity assumption. So, to arrive at a parsimonious causation model, we implemented a stepwise regression procedure.

The stepwise regression procedure discarded the LMX as a significant predictor of productivity because of its low explanatory effect on board performance ($\beta = -0.45$, $p > 0.05$; with LBD in the model). Hence, there is sufficient evidence to accept the conjecture that leadership behaviors of educational leaders (but not leader-member relationships) affect school productivity. Regression coefficient ($\beta = 1.909$, $p < 0.05$) shows that LBD is a significant predictor of board performance. Thus, the regression model is:

$$\text{productivity} = 1.909 \times \text{LBD} + 17.194 \pm \text{errors}$$

This linear equation (with corresponding graph in Figure 2) can be used to predict the institution's board performance given the leadership behavior description scores, plus or minus the standard errors. However, the value of the R-square is small ($=0.293$), which means that the model can only account for the 29.3% of the total variations observed in board performance, and the rest (i.e., 70.7%) can be explained by other factors not included in the model. Furthermore, the standard error for the intercept is large ($=12.195$), making it difficult to precisely predict board performance or school productivity.

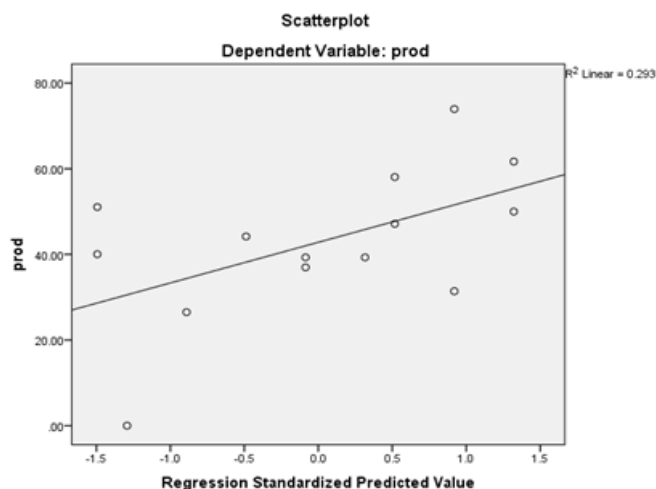


Fig. 1. The scatter plot and regression line for the dependent variable 'productivity'.

Although we have shown that leadership behaviors are significant predictors of school productivity, the

result is not sufficient to predict board performance using only LBD scores. Other indicators of school effectiveness (independent of LBD) may be used as additional explanatory variables to increase the model's fit to the data.

What Do Our Data Tell About Leadership Theories?

On account of the associations among LBD, LMX, and productivity, we used the items in the LBDQ and LMX 7 to show the applications of the different theories of leadership.

On Douglas McGregor's Theory X and Theory Y

X and Y theories are the theories of motivation and management created and developed by Douglas McGregor [14], a social psychologist, at the MIT Sloan School of Management. They are two contrasting theories that explain how the beliefs of the managers about what motivates their people can affect their management style. He labelled these to two styles of management as Authoritarian Theory X and Participative Theory Y. The approach of the manager will have a great impact to influence the members.

Theory X assumes that people dislike their work and are not motivated to do their job. The managers have a pessimistic view on their workers. Theory X believes that employees come to work just for living and they do not want to take new responsibility. As a result, the members have to be prompted, rewarded or punished to complete their task. Here the authoritarian style of management is used.

This type of management considers that workers: dislike their work; evade responsibility and require constant direction; have to be forced, controlled and threatened to perform their work; and have to be enticed by reward or threatened by punishment to achieve the desired goal.

McGregor suggested that organizations with the Theory X approach need several managers and supervisors to oversee and direct the workers. Authority is rarely delegated, control is centralized, and the managers intervene to get things done.

Theory Y manager assumes that the employees come to work because they want to work. It has optimistic, positive opinion on the workers. This theory encourages a collaborative and trust-based relationship between workers and managers. They take pride in their work and consider it as a challenge and they derive on responsibility. So, managers use decentralized and participatory management style.

This type of management considers workers: happy to work on their own initiative; more involved in decision making; self-motivated to complete their tasks; seek and accept their responsibility and need little guidance; view work as fulfilling and challenging; and solve problems creatively.

According to Theory Y, people have greater responsibility and managers encourage them to develop their skills and suggest improvements. Open communication is encouraged. In our group data gathered we observe that the Theory Y is mostly present. Most of the questions in the second part of the LMX express the leader-worker relationship and their communication. The average with seven questions regarding relationship among the 14 participants was 22.61 as the minimum is 17 and maximum is 30. This is the clear indication that the relationship is well maintained and appreciated between the leader and the workers. The data on the averages of the sum of the answers prove that the workers are happy and feel respected in their workplace. Though we cannot deny the presence of the Theory X, where the workers are regularly guided and supported, the prevalence of Theory Y is evident from the data available. The sums of number of years of work show that the new starters likely need more guidance. The experienced ones have greater average.

On Behavioral Theories of Leadership

The researchers also tried to look at the role of motivation in the behavior of respondents and the organization's productivity. Similarly, with the above result of LMX, the fourteen (14) respondents had an average score of 8.5 out of the ten LBD questions on people leadership style, indicating the leaders' concern for people. The highest number of "yes" response was on Q18; that is, encouraging employees to cooperate rather than compete with each other. This was followed by Q12 and Q14 which were on trust and acknowledging employees for doing the job based on standards and goals. The rest of the LBD items also had positive responses of the majority except in Q16 (only 5 answered "yes") pertaining to "being open to employees to discuss personal issues during work time". This is understandable because leaders are also task- or goal-oriented such that they do not want to unnecessarily short change the time. These positive responses well supported the different motivational theories in leadership. Based on "Elsevier's Dictionary of Psychological Theories", there are three categories of

motivational theories which are the Hedonic Theories, Cognitive Theories, and Growth Theories.

Herzberg [15] proposed a motivator-hygiene theory or the two-factor theory. His theory falls under the Hedonic Theories of motivation, which is the largest category among the three, wherein pleasure plays the role to organizing lives. It assumes that happy employees are more productive. According to Herzberg, there are job factors where leaders can prevent dissatisfaction and there are job factors which may result in satisfaction and may serve as motivators. The job factors that can prevent dissatisfaction are called hygiene factors and these are the company policies, fringe benefits, physical working conditions, salary, status in the organization, and interpersonal relationship. The motivators, on the other hand, are recognition, meaningfulness of work, reasonable responsibility, professional growth and promotion. From the LBDQ results, the responses showed evidence of existing motivators being done by leaders such as strong personal relationships through mutual trust, recognition, encouragements, consultative decision making and efforts to know and help employees. These motivators can probably explain why there was a positive association with the passing rates of the institutions and the leadership style because employees are happy, thus making them productive. There were only a few indications of dissatisfaction in the responses, which indicates a good interpersonal and working condition in their respective organizations. Hence, the result of the present study supports Herzberg's theory.

With respect to the cognitive theories of motivation, we can see the result of the study is consistent with the Goal-Setting Theory. Positive responses in LBD Q3 and Q5 (12 out of 14 answered "yes") indicated that employees performed better due to the clear-cut goals set by their leaders. This meant that there were specific objectives, scheduling, and feedback made by the leader and was consulting the members for decision making (Q10). This also presupposes that goals are agreed by all, attainable and challenging (using the SMART model of writing objectives). Cognitive dissonance theory is also being affirmed in the result of the present research, showing harmony in what members believe and what they are doing in the organization, which eventually led to the employees' satisfaction. Moreover, results also showed agreement with Vroom's [16] Expectancy Theory, which states that the motivational force

$$MF = \text{Expectancy} \times \text{Instrumentality} \times \sum (\text{Valence}(s)).$$

Vroom's expectancy theory of motivation is not about self-interest in rewards but about the associations people make towards expected outcomes and the contribution they feel they can make towards those outcomes. This theory is supported by the positive responses in LBD Q1, 3, 5, 9, 10, 11, 13, 14, 15, and 20.

Furthermore, the present study showed consistency with growth theory of motivation, particularly to self-determination theory. Self-determination theory identified three (3) innate needs that will allow optimal function and growth if satisfied. The three innate needs are competence, relatedness or connectedness, and autonomy. The concept of intrinsic motivation is very important in this theory. Deci and Ryan [17] developed this theory of motivation, which suggests that people tend to be driven by a need to grow and to gain fulfillment. The need for competence of the respondents showed this need was met based on the positive responses in LBD Q11, Q13, and Q15. The need for relatedness showed it was satisfied based on the positive responses in LBD Q14, Q18, and Q20. This also showed that the respondent employees felt connected and attached to the organization. Likewise, the need for autonomy has been gratified based on the positive response in Q8 where employees are encouraged to solve problems related to their work without having to get permission to do so.

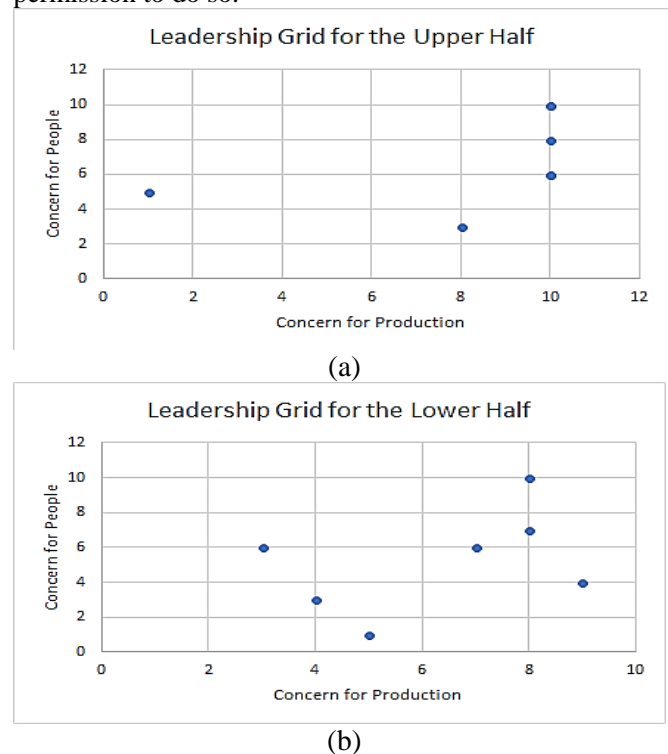


Fig. 2. Scatter plots of the responses in LBDQ odd- and even-numbered items by respondents from (a) high-performing HEIs and (b) poor-performing HEIs.

On the Application of the Leadership Grid

Using the data gathered from administering the 20-item LBDQ, we plotted in the Leadership Grid [18] [19] the individual respondents' points whose coordinates correspond to the number of Yes in odd-numbered items (x-axis) and the number of Yes in even-numbered items (y-axis). The responses to the odd-numbered and even-numbered items represent the leader's concern for production and concern for people, respectively. We presented two separate graphs for the high-performing HEI's (upper half) and for the low-performing HEI's (lower half). The identification of the upper- and lower-halves was done by ranking the HEIs according to their board performances (in the order from highest to lowest) and by getting the median to be used as a threshold for categorization. As shown in Figures 4a, the leaders' approaches in high-performing HEIs are more of team leadership style because majority of the points are located at the upper right-hand side of the Leadership Grid. (Note that there are overlapping points in the graph; that is, two points are located at (10,10) and two are at (10,6).) Only one is categorized as impoverished leader, and one is of authoritative-compliance style.

The graph for the lower-half does not clearly represent a unique leadership style that leaders in low-performing HEIs exhibit as perceived by the CHED scholars. As shown in figure 4b, three leaders in this group are team leaders, two are more likely impoverished leaders, one from country club, and one of authority-compliance style. The implication of these two Leadership Grids is that leaders in effective or highly productive HEIs tend towards a leadership style that has a high concern for both their people and organizational productivity (also called high-high leadership style).

CONCLUSION AND RECOMMENDATION

From the above results, we conclude that leadership styles have an effect on organizational performance and productivity. In this study, we established the strong association between leadership behaviors exhibited by educational leaders in various HEIs in the Philippines and their productivity in terms of performance in licensure examinations in 2016. A causality function in the form of a linear regression equation was also derived in order to predict licensure performance given a leadership behavior score. But the model was not of best fit to the data at hand, and additional independent variables are needed to account for a higher proportion of variations in productivity.

The data also show consistent patterns as described by the various leadership theories, such as McGregor's X and Y theory and some motivational theories (Herzberg's Two-Factor, Vroom's Expectancy, and Deci-Ryan's Self-determination). An application of the Leadership Grid also showed consistent result, with majority of the high-performing HEI leaders' locations in the upper right-hand side of the grid representing team leadership style. This implies that team leadership creates a conducive working environment where synergy is achieved. Congruent with the results on the significant association between leadership behaviors and overall organizational performance and on the weak association between leader-member relations and overall organizational performance, team leadership exemplified by an HEI leader contributed a considerable amount to the whole organization's output (board performance) as a cumulative effect, exceeding the individual member contributions to the total organizational productivity.

The strong association between leader behavior and school productivity can be explained by the complementary roles that task- and people-orientations play in the leadership process. This is supported by the wide acceptance of the team leadership (high concern for production, high concern for people) as the best approach to improving organizational performance and productivity. This means to say that relationships alone (in the absence of task structure) are not sufficient to effect change in individual, group, or organizational performance. Weak association between leader-member exchanges and school productivity can explain this phenomenon.

Some limitations were observed in this study. First, the study involved a limited number of respondents coming from different universities and colleges in the country. This small sample size may affect the generalizability of the results to all HEIs, their leaders, and their productivity. Second, the proxy variables used to model the relationships among leadership styles, behaviors and relations, and organizational productivity were quite a few and showed statistical collinearity properties which prevented the derivation of a model with best fit to the data. In the light of these shortcomings, we recommend that future studies on the effects of leadership behaviors/styles on productivity be conducted using a larger sample size, more precise and accurate measuring tools, and more focused analytical procedures.

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