

Relationship Between Human Development Competencies and Work Performance

¹Neda Tiraieyari, Khairuddin Idris, Jegak Uli and Azimi Hamzah

Laboratory of Rural Advancement and Agriculture Extension,
Institute for social science studies, University Putra Malaysia

Abstract: This research investigates the relationship between human development competencies in terms of leadership development and problem solving / decision making development and work performance among Malaysian extension workers at the department of agriculture with the emphasis of having human development competencies in order to perform the extension work well. Stratified random sampling technique employed to select 210 extension workers from the department of agriculture in four states of Malaysia. A structured research instrument was utilized to survey extension workers' human development competencies and work performance. The data were analyzed using descriptive statistics and Pearson correlation analysis. Extension workers reported high level of leadership development competency and problem solving / decision making development competency. The findings supported a positive relationship between human development competencies and work performance.

Key words: Competency. Work performance. Leadership Development. Problem solving/ Decision Making Development

INTRODUCTION

Extension workers' role in developing countries has been transferring agricultural technologies to clients in order to increase productivity. Although majority of extension workers transfer technical innovations to rural people however extension is known as a human system. Extension therefore is a human process as well in which technical information are used to help rural people achieve their potentials (Boone, 1990). One of the importance role that is considered as marginal by extension workers and extension organizations is to develop human's capacity and potential through teaching leadership development program and problem solving/ decision making development program to clients. The objective is to develop clients to become better leaders and better decision maker (Roling, 1988). With the help of this concept, clients acquire better understanding into their problems and the alternative solutions. By using this skill, clients know what to ask for, they can evaluate the new technologies and they will be the ones who actively seek further information and assistance (FAO, 1997). In fact the challenge is to strengthen the capacity of clients and enable them to access extension services. Hence this paper focuses on human development competencies in terms of leadership development competency and problem solving/ decision making development competency which extension workers should acquire to perform the extension job well. Leadership development and problem solving/decision making development are two of many dimensions of human development competencies that extension workers must have in order to provide it to clients.

Competency and Performance:

The concept of competency is not new to extension. Many studies have been conducted to identify competencies needed by extension workers. Cooper and Graham (2001) identified 57 core competencies such as involving people in program planning, teach decision making skills to clients, develop volunteer leader, ability to work with key leaders, people skills, ability to lead, communication skills, and being a team player. Liles and Mustian (2004) identified seven core competencies as critical to successful performance of extension workers; knowledge of the organization, technical subject matter expertise, Programming, professionalism, communications, human relations, and leadership. Many studies have also examined the relationships between competency and performance. Hence the link between these two concepts is well established. Parry (1998) pointed out that competency is correlated with performance that can be measured and enhanced through training. Hoffman (1999) stated the purpose of competencies as to improve individual performance at work. Dhanakumars (2001) and Linders (2001) reported that performance and extension competencies are positively

related. According to Heffernan and Flood (2000) there is a positive relationship between competencies and performance. Similarly Armstrong (2006) stated that competencies are factors that contribute to high levels of individual and organizational performance. Previous studies have identified various competencies thought to be needed by extension workers in agricultural extension education in the areas of extension process, human development, educational processes, teaching strategies, program planning, implementation, and evaluation, teach decision making skills to clients, develop volunteer leader, ability to work with key leaders and communication skills (Keregero, 1981; Gonzalez, 1982; Pezeshki Raad, Yoder & Diamond, 1994; Gibson & Hillison, 1994; Cooper & Graham, 2001; Miller & Cox, 2006). It was found that these competencies should be possessed by extension workers in order to effectively perform their role. However few studies have examined the relationship between human development competencies and extension workers' performance (Thach, *et al.*, 2008; Khalil, *et al.*, 2008). Although in developing countries the importance of providing leadership development and problem solving/ decision making development for clients in agricultural extension and education has been recognized but its impact on extension workers' performance mostly unreported. In this study, researchers focuses on only two human development competencies and examines the relationship between these competencies with performance of extension workers.

Relationship Between Leadership Development Competency and Work Performance:

A majority of definitions of leadership reflect some basic elements, including group influence and goal (Bryman, 1992). De Jong and Den Hartog (2007) defined leadership as the process of influencing others towards achieving desired outcome. Similarly Hellriegel *et al.* (2004) define leadership as the ability to influence other to act toward the attainment of a goal. Mullins (1999) adds that it is a relationship through which one person influences the behaviors of other. Leadership can also be defined as a social influence process. It involves determining the organization's objectives and encouraging behavior in pursuit of these objectives (Erkutlu & Chafra, 2006). In any community there are a number of leaders who make decisions on behalf of others, or who are respected by others, and therefore have some influence on their attitudes and behaviour. Such leaders can be very important for the success of extension workers (Oakley and Garforth, 1985). Leadership was identified by Sheard and Kakabadse (2004) as the most important key factor influencing the speed of transformation. In the study of Georgia's Community Leadership Program conducted by Langone (1992), extension workers can serve as a viable resource in helping communities to change socially and economically. The need for leadership for rural communities has been well-documented. At the national level, Extension has emphasized the importance of leadership development and extension's role in providing training in this area for the clients. Within any organization, identifying critical leadership competencies required for effectiveness helps define what skills leaders need (Pernick, 2001). According to Moor and Rudd (2004), a leadership skill can be defined as an ability which can be developed, and which is manifested in performance. According to Voci and Young (2001) the specific leadership behavior includes the ability to work within the system, ability to select innovative ideas, capacity for drive, patience and persistence, Mastery of one's own emotions, or emotional intelligence, Whole systems thinking, Ability to evoke trust and place trust in others and Ability to use technology. There is often inexperienced leadership among clients. Weak or inappropriate leadership inhibits clients' capacities to address their needs. Weak leadership tends to create dependency (Rivera & Qamar, 2003). Hence one important task of any extension worker will therefore be to provide leadership development skill to clients.

Leadership Development (LD):

Day (2001) defines leadership development as expanding the capacity of organizational members to engage effectively in leadership roles. Zemke and Zemke (2001) asserted leadership development aims to build the capacity of potential leaders. According to Campbell *et al.* (2003) there are so many perspectives on how to develop leadership skill. In this study researchers utilize LD in terms of developing and enhancing various intra-personal qualities and interpersonal skills.

Development of Intra-personal Qualities:

All leadership development approaches place some degree of emphasis on personal development. Generally, this intrapersonal development involves helping the individual create a self-model to heighten self-awareness, increase self-regulation, and enhance self-motivation (Day, 2001). This type of intra-personal development allows the clients to perform various leadership roles (Campbell *et al.*, 2003).

Development of Interpersonal Skills:

A second emphasis in LD focuses on development of particular interpersonal skills and qualities needed by the leader to motivate followers (Drath, 1998). This approach to LD sees leadership as a social influence process and focuses on the development of human relations skills such as showing sensitivity to others, building teams, listening empathetically, providing helpful feedback, and diffusing conflict. Likely LD enhances individual's social influence. From this perspective, leadership development's goal is to develop interpersonal competence such as social awareness and social skills in order to obtain the trust, respect, and commitment of others (Day, 2001). One of the role leaders plays is enhancing innovative behaviour of community. Previous work has indicated that innovative behaviour depends greatly on their interaction with others (Anderson, Dedreu & Nijstad, 2004; Zhou and Shalley, 2003). Similarly in rural organization, clients' innovative behaviour depends greatly on their interaction with others in the rural areas. In general, leaders have a powerful source of influence on followers' behaviours (Yukl, 2002). Howell, Neufeld and Avolio (2005) pointed out that Prior research have all provided support that leadership skills relate to higher individual and organizational performance (Dumdum, Lowe & Avolio, 2002; Dvir, Acolio & Shamir, 2002; Howell & Avolio, 1993). The majority of previous studies demonstrate that leadership is positively related to individual and organizational effectiveness, and performance. In general, leadership has been linked to higher levels of performance.

Although the extension system has a long history of work in leadership development, there is little understanding of the range of skills taught or the amount of effort directed toward teaching leadership skills to clients (Paxson, Howell, Michael & Wong, 2005). Paxson *et al.* (2005) conducted a survey to more than 3,300 extension workers and their supervisors to determine the amount of time devoted to leadership development work. Leadership competencies were included in the questionnaire to determine the extent to which extension workers were teaching clients. More than 40% of extension workers reported trying to develop the leadership skills of clientele. Nine percent didn't try to develop leadership skills. Three-fifths of extension workers reported developing clientele leadership skills while teaching non-leadership subjects. On average, they spent seven hours per week trying to develop leadership skills among clients, or about 15% of their work time. It has been widely accepted that leadership competency can influence performance. Despite agreement on the importance of providing clients with leadership skill by extension workers (Sandmann & Vandenberg 1995; Boyd, 2001; Morse, Brown & warning, 2006), only few research in the literature assessed relationship between leadership development competency and extension workers' performance. Result of study conducted by Ali Hassan Obaid Khalil *et al.* (2008) to determine the relationships between competencies, organizational commitment and job satisfaction with work performance of extension workers in Yemen revealed a positive relationship between leadership development competency and extension workers' work performance ($r = 0.50$; $p = 0.001$). Various studies explore the influence of extension workers' leadership behaviors in relation to performance outcomes, that is, leader behaviours that positively affect outcomes such as effectiveness and efficiency rather than provide and build this competency to clients.

Relationship Between Decision Making and Problem Solving Development Competency and Work Performance:

Employers employ who are capable of solving problems, making effective decisions, but employees often do not have these skills that meets employers' expectations (Ferry, 2006). Problem solving is a process in which a gap between a present situation and a desired goal perceive and resolve. In general, the situation is one not previously encountered, or where at least a specific solution from past experiences is not known. In contrast, decision making is a selection process where one of two or more possible solutions is chosen to reach a desired goal. The steps in both problem solving and decision making are quite similar. In fact, the terms are sometimes used interchangeably (Huitt, 1999). Most models of problem solving and decision making include at least four phases: 1) Input phase in which a problem is perceived and an attempt is made to understand the situation or problem; 2) Processing phase in which alternatives are generated and evaluated and a solution is selected; 3) Output phase which includes planning for and implementing the solution; and 4) Review phase in which the solution is evaluated and modifications are made, if necessary (Bransford & Stein, 1984; Polya, 1971). Yet the process that people use to make a decision maybe as important, or more important, than the information available in making a good decision (Gallagher, 2002). Stone and Freeman (1989) pointed out that the rational model of decision making consists of three steps: define the problem as goals, develop alternatives and evaluate alternatives to select the best course of action. Gallagher (2002) suggested four steps for decision making process: Identify the values, and set goals to achieve them, next step is gather information to understand the context in which the goal are to be achieved, create alternative ways to achieve the goal and finally analyze the alternatives, and decide which one best meets the goals. Most researchers describe the

problem-solving/decision-making process as beginning with the perception of a gap and ending with the implementation and evaluation of a solution to fill that gap (Huitt, 1999). Cognitive abilities such as the ability to solve problems, planning, organizing, thinking abstractly, and grasping the nature of problems and making decision have been shown to be the best predictors of work performance. It is widely accepted that tests measuring cognitive skills do a good job of predicting performance. Critical thinking scores have been found to correlate with work performance (Gaston, 1993; Ejiogu, Yang, Trent, & Rose, 2005). Similarly Barrick and Alexander (1987) suggested that the problem-solving procedures could modify the work processes thereby influencing productivity and performance (Pereira and Osburn, 2007). Results of study conducted by Ejiogu *et al.* (2006) indicated that critical thinking ability is related to several important aspects of performance.

The objectives of the study are to:

1. Determine the level of leadership development competency among extension workers.
2. Determine the level of problem solving /decision making development competency of extension workers.
3. Determine the relationships between competencies and work performance.

The following are hypotheses related to specific objective of this study:

1. Ha: There is positive linear relationship between leadership development competency and work performance.
2. Ha: There is positive linear relationship between problem solving/decision making development competency and work performance.

MATERIAL AND METHODS

The present study is a descriptive correlation to allow a quantitative description of the relevant features of the data collected as well as the relationship between the variables. In this study the extension workers' performance is dependent variable. Eleven dimensions of performance namely quality of work, quantity of work, timelines, effectiveness of work, work knowledge and skill, implementation of policy and procedures, effectiveness of communications, ability to manage, discipline, proactive and innovative, relationship and co-operation were applied in this study. These eleven dimensions were reviewed and validated by experts familiar with extension work. Researcher adopted and modified performance dimensions to suit the purpose of this study. Independent variables are leadership development competency and decision making / Problem solving development competency which may have relationship and determine extension workers' performance. The research framework for this study is shown in figure 1.

This study employed a geographical stratified sampling method. Samples were chosen using a simple technique called proportional sample allocation. The size of the sample in each state (stratum) is taken in proportion to the size of the stratum. From each state, respondents were selected at random (every 2nd) from the complete list of respondents. The list of extension workers in each state was obtained from the Department of Agriculture.

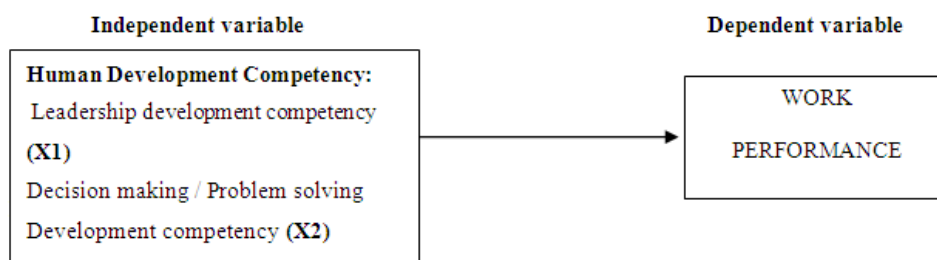


Fig. 1: Research framework.

Instrument and Measurement:

This study utilized a questionnaire to collect data from the respondents. Human development competencies which include two sub variables:

1. Leadership development competency:

This variable measured by the extent of extension workers' ability to provide clients with leadership development training program in terms of developing and enhancing various intra-personal qualities and interpersonal skills (Campbell *et al.*, 2003). Eleven items were developed through the literature to measure this variable.

I provide clients with information on their strengths and weakness as a basic for self improvement.

I train clients to set goals for themselves so that they can keep track of their progress

I'm able to reinforce positive attitudes about new technologies among my clients to enhance self motivation.

I'm able to enhance self- motivation among clients who are reluctant to consider new practices.

I teach clients how to enthuse others to join the extension activities.

I train clients how to build team and involve team members define the common objectives.

I would get clients to create teams that engage in developing the vision and means to achieve objectives

I get local leaders to influence a wide range of diverse individuals and groups of clients positively towards the adoption of new technologies.

I'm able to identify new leaders among my clients.

I plan and develop leadership development programs for clients and local leaders.

I permit local leaders to lead group discussions in extension activities.

2. Problem solving/decision making development competency:

This variable was measured by the extent of extension workers' ability to provide clients with problem solving/ decision making development training program. The process of identifying problems, securing relevant information, developing alternative courses of action, and the readiness of making a decision from the information gathered (Gallagher, 2002). Six items were developed for this variable.

I am able to get clients to identify and prioritize their core problems.

I would get clients to gather all related information in identifying the problems faced by them.

I'm able to teach clients to identify and discuss several options to deal with problems.

I would discuss with clients their problems before providing possible solutions to them.

I would thoroughly evaluate solutions, with clients' involvement, to solve their 'problems.

I am able to teach clients on how to become an effective decision maker.

Work Performance:

In this study, work performance was measured using different function of their job. Respondents were asked to assess their performance on eleven dimensions. The dimensions are quantity of work, quality of work, timeliness, effectiveness of work, knowledge and skill in work, implementation of policy, procedures and direction, effectiveness of communication, ability to manage, discipline, pro-active and innovative, and relationship and cooperation. Forty six items were developed for this variable. Variable was rated through self rating system. A ten-point scale was used to measure the constructs. A drop-off and pick-up method was adopted to collect data from the respondents.

Validity and Reliability of the Instrument:

As a first step toward validating the instrument, the items were reviewed by panel of experts comprising various faculty members from University Putra Malaysia. The instrument was pilot tested with 20 extension workers from the Selangor state of Malaysia. Reliability analysis was also performed for each scale. The results of reliability statistics for leadership development competency was .929 and for problem solving/ decision making development competency was .851 and for overall performance were .960. Furthermore, reliability analysis for each dimension of performance was conducted. The Cronbach's coefficient alpha for eleven dimensions ranged from 0.870 to 0.948.

RESULTS AND DISCUSSION

Research Objective 1 and 2:

The first objective of this study was to determine the level of extension workers' leadership development competency. Based on the ten -point scale used, the minimum rating was 4.09 and a maximum of 9.55 and this gives a range of 5.45. The median leadership development rating value was 6.54 with a standard deviation of 1.00. The mean leadership development rating was 6.53 implying that the level of leadership development is high. In accordance with the rating of low, moderate, high and very high, as the indication of the level of leadership development skill, the extension workers have rated high in explaining their leadership development skill. The extension workers who felt that their level of leadership development is high were 62.9%, moderate

22.4% and very high 14.7%. The second objective of this study was to determine the level of extension workers' problem solving /decision making development competency. Findings indicate a mean rating of 7.16 for problem solving /decision making development competency with the minimum rating of 3.83 and a maximum of 9.83 and this gives a range of 6.00. The median problem solving /decision making development rating value was 7.16 with a standard deviation of 1.16. The extension workers have rated high in explaining their problem solving /decision making development skill. Some of extension workers 54.8% reported that they possess a high level of this competency, a further 30% very high, and 14.7% moderate, and 5% low (Table 1).

Research Objective 3:

The Pearson correlation coefficient was employed to achieve the second objective of the study. Results shows that Performance of extension workers is positively related to leadership development competency ($r=.472, p=.001$) and Problem solving/decision making development competency ($r = .507, p= .001$). According to the Table 2, a medium relationship was found to exist between leadership development competency and their performance whereas problem solving /decision making development competency shows a fairly large correlation with extensionists' performance. As a result, the hypotheses are supported.

Performance of extension workers positively related to human development competencies. This is consistent with past findings that suggested there is a positive relationship between extension workers' competency and performance (Heffernan & Flood, 2000; Dhanakumars, 2001 & Linders, 2001; Armstrong, 2006). In relation to leadership development competency, the results of this study also appear to be in line with Ali Hasan Obaid Khalil *et al.* (2008). They reported a significant relationship between leadership development competency and extension workers' performance ($r= 0.50, p= 0.001$). It is clear that there is definitely a need for extension workers to learn and implement leadership development skills that increase extension workers' performance. It has generally been acknowledged that individual performance requires effective leadership development competency. Extension workers should have human development competency in order to perform their job responsibilities and must be able to provide this competency to clients.

Table 1: Level of human development competencies

Items	Mean	Standard Deviation	Minimum	Maximum
Leadership development competency	6.53	1.00	4.09	9.55
Problem solving/ decision making development competency	7.16	1.16	3.83	9.83

Table 2: Range for interpreting the correlation coefficients

r	Strength of Relationship
-0.10 to-0.29 and +0.10 to +0.29	Small correlation
-0.30 to-0.49 and +0.30 to +0.49	Medium correlation
-0.50 to-1.00 and +0.50 to +1.00	Large correlation

Source: Cohen (1997).

Conclusions:

Extension workers in department of agriculture (DOA) perceived themselves competent in human development in terms of developing leadership skill and problem solving/ decision making skill among clients. In other words extension workers perceived they have required knowledge and skill to develop clients to become better leaders and decision makers. According to the correlation analysis, competencies studied in this research were found to have correlated with extension workers' performance. Hence competency correlates with performance. These findings could be concluded as: Extension workers' performance is expected to increase if extension workers have human development competencies. The results of this study challenge extension workers to consider developing their human skills along with technical skills to develop clients' potential and capacity. It is important for extension managers to give emphasis on human development among their clients rather than just focusing on technology transfer. Focused attention on human competencies must be paid in order to keep extension workers competent. It is recommended that the DOA undertake a training program to develop and equip its extension workers with human development skill necessary for higher performance.

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