Investigating the Relationship between Competency Development and Organizational Performance

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Abstract--Competency development and human resources are increasingly valued by organizations. Employees are confronted by the question of how to enhance their abilities to meet the needs of organizations. For organizations, talent is a crucial enterprise resource in the era of the knowledge economy. One of the key success factors in enterprise management is finding and developing the right talent for the organization. The competency of employees at every level must be established through recruitment, promotion, educational training, and employee career development methods to enhance talent quality and competitiveness, and ensure that enterprises achieve their performance goals.

This study investigated (a) the current condition of competency implementation in enterprises; (b) the interconnectedness of competency and recruitment, training, and performance; and (c) the correlation and causality between competency and enterprise performance. Interviews were conducted with professionals and organizations awarded with the Taiwan's National Training Quality Award to understand the implementation and application of competency in these organizations, which will serve as a reference for enterprises with the intention to advance in competency implementation.

I. INTRODUCTION

The application of technology management in enterprises can create competitive advantage by managers and staffs. Frederick Winslow Taylor, regarded as the father of scientific management, was one of the intellectual leaders of the efficiency movement. His ideas of scientifically truncating, analyzing, and improving innovated workflows were highly influential in the area of technology management [20]. The evolution of modern duties analyzing, job description and business developing of functional management makes the management turn to scientific management from experiences of managers.

The Office of Competency Standards was established in Taiwan because of the active promotion of competency by government agencies. To guide competency development, the Office of Competency Standards aims to establish competency standards for each industry with reference to international success models and national enterprise characteristics. Increasing attention has also been placed on the active investment by academic institutions in organizing seminars and academic studies regarding competency. Competency development can be applied to aspects of recruitment, educational training, performance management, job transfers and promotions, succession planning, talent inventory, employee career development, and human resource (HR) overall performance. Thus, the importance of competency to enterprises is evident, and the implementation of competency is trending throughout enterprises. How and to what degree has enterprises implemented competency? Has the implementation process been aided by government resources or other external factors? What is the key success factor in competency implementation? What are the challenges encountered in the course of implementation? Is organizational performance correlated to competency implementation? These questions concern the conditions of competency implementation in actual organizations. In particular, this study determined whether competency implementation among benchmark organizations awarded with the Taiwan's National Training Quality Award (TNTQA) could be used as a reference for other enterprises. These questions guided the investigation and analysis conducted in this study, and informed the recommendations for enterprise implementations of competency proposed in this study.

II. LITERATURE REVIEW

A. Meaning and Connotation of Competency

The concept of competency was first proposed by McClelland [13], who questioned whether student admissions should be based on intelligence, and believed that emphasis should be placed on the abilities that actually contribute to student learning performance— not intelligence.

Spencer and Spencer [19] proposed the concept of competency as a management model that takes ability into consideration. The main purpose of this management model is to identify and confirm the abilities and behaviors that contribute to superior work performance, and to assist organizations and people with enhancing work performance. The Iceberg model, proposed by Spencer and Spencer [19], described the competency as the combination of a person's external and underlying characteristics.

Scholars such as Mansfield [12], Parry [16], McLagan [14], and Boyatzis [1] have believed that competency is a combination of knowledge, attitude, and skills. Employees can acquire these qualities through education and training, thus enhancing their performances. The viewpoints of these four scholars are consistent with the competency management model proposed by Spencer and Spencer [19], and have become the primary theoretical foundation of competency implementation.

B. Investigation of Organizational Performance

Management theories divide performance into efficiency and effectiveness. Drucker [5] believed that efficiency is doing things in the right way, whereas effectiveness is doing

the right things. Langsner [10] proposed that performance evaluations are personnel ratings, and comprehensively and systematically evaluate skills, work performance, degree of qualification, and employees' attitudes within an enterprise. By contrast, scholars such as Levinson [11] and Hartel [8] have considered performance evaluation a consensus between an organization and an employee established on the basis of the employee's personal performance and the organization's performance at large. This evaluation serves as the basis for raises and promotions, to increase the probability of goal completion. Campi [3] believed that top performers should be selected based on performance evaluations to serve as role models for employees at the same level.

C. Correlation between Competency and Performance

Schermerhorn [18] argued that good work performance basically occurs when employees appropriate supports and abilities to complete jobs when their efforts are put into job completion, and the ability is the most crucial factor. Thus, enhanced personal competency has a certain degree of influence on the enhancement of work performance.

Scholars such as Drucker [6] and Wellins and Byham (2001) have indicated that the survival and development of enterprises are determined by the ability and quality of management personnel in competitive environments. Management personnel are a key factor in the success of enterprises. Businesses must establish and support the competency of management personnel to gain a superior competitive edge.

Spencer and Spencer [19] mentioned the competency model, describing competency as a process from investment to production. Behaviors are expected based on personal motives, traits, ideas of the self, and knowledge competency, which give rise to different results, and hence, difference work performances.

Hall [7] developed a performance equation: performance = ability * motive * opportunity, where the absence of any factor affects the performance outcome. As seen from this equation, competency is a key factor.

D. Correlation between technology management and human resource

The concept of technology management was first proposed by National Research Council (NRC): technology management included the developing and executing of technologic ability to accomplish the interdisciplinary academic of organizational business objectives [15]. Price [16] proposed that technology management was connected to engineering, science, marketing, and human resources. It was also used for planning strategic technology developing to reach tactic goals. Chiaromonte [17] pointed out that technology management applied technology innovation to accomplish activities in company targets and design development and implementation of the duties and relationships. Khalil [9] considered that technology management included innovative technology, development of new products or service, and the process of commercialization to accomplish management activities of enterprises goals.

III. RESEARCH PROCESS AND METHODS

A. Research Process

This study was divided into five steps. (1) The research background, purpose, and the research topic were determined, and a literature review was conducted. (2) Competency- and performance-related studies were gathered from the literature, and were organized based on their results into a theoretical structure for competency and performance applications. (3) This theoretical structure was then used as a foundation for blueprints for individual case studies. (4) In-depth interviews were conducted: expert academic opinions on competency development were obtained in interviews, and their opinions were subsequently integrated to conduct individual case interviews with personnel at TNTQA-awarded organizations. (5) The research was summarized, and recommendations were proposed; the research structure and expert interview contents were established; and individual case in-depth interview question design were modified according to expert opinions. Actual in-depth interviews were conducted, data were analyzed to obtain study results, and research summary and recommendations were presented (Fig. 1).
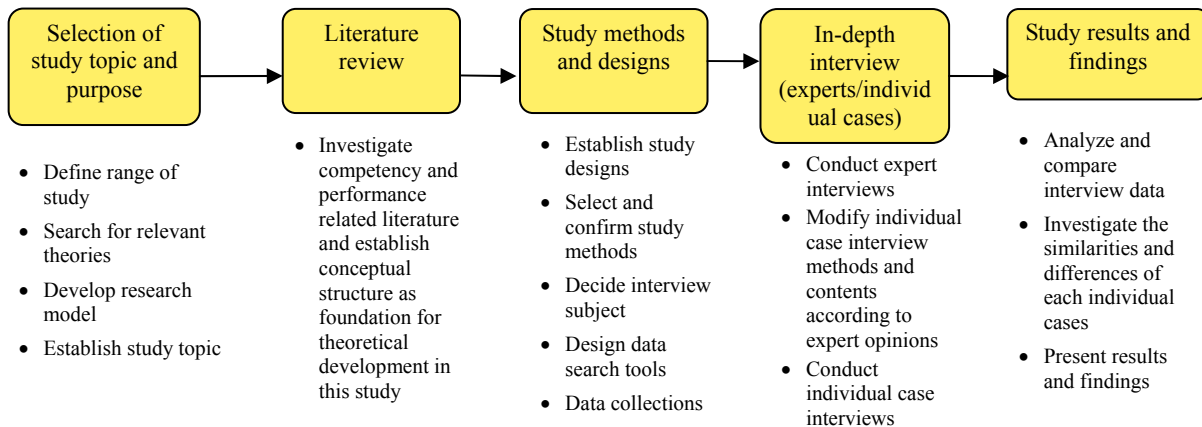

Fig. 1 The study research process flowchart

B. Study Subjects

This study addressed industry stakeholders, government project organizers, and academics concerned with the subject of this study. Expert interviews were conducted with government contractors promoting competency certification, and expert scholars; individual case interview subjects included two winners of the TNTQA.

C. Study Methods

The expert interview and individual case interview methods are described below. According to Ye's summary (2001), individual case studies can be divided based on whether their goals are exploratory, descriptive, or explanatory. This paper is an exploratory study. Expert scholar opinions were obtained in interviews, and individual case interviews were conducted after these opinions were integrated into the study process. The multiple choice items in the interview were constructed based on interviews with people holding multiple perspectives, to evaluate various attributes and dimensions. The concepts obtained from the interviewees during the interview process were organized to outline the principles governing the various phenomena and facts. The theoretical basis was then extracted, and undeveloped classes were further analyzed and integrated into the research.

IV. INTERVIEW DATA ANALYSIS AND INVESTIGATION

A. Expert Interview Results

The interviewees included Chief Executive Officer (CEO) Mr. Huang of the Taiwan Development Institute (TDI), which is a contractor in the government promotion of competency certification unit; Advisor Chen, a competency survey expert; and Hsu, a professor of human resources. Individual case interviews were designed and modified based on an understanding of government-promoted competency development policies and expert scholar opinions on implementing and developing competency.

The TDI is tasked with providing counseling services in government-promoted competency certification, Taiwan Training Quality System (TTQS) training, and counseling and assessment, as well as ensuring that enterprises have opportunities to participate in the competency implementation process through government-promoted policies. However, because of government resource limitations, only a few enterprises can apply for the counseling service, which is problematic. CEO Huang mentioned that individual case interviews can provide an understanding of how the methods and applications of actual implementation in enterprises differently affect organizational performance. The other two expert scholars believed that competency implementation could include eight items (recruitment, education and training, performance management, job transfer and promotions, succession planning, overall performance of human resources, employee

career development, and others) to provide a picture of actual performance after competency implementation. These eight dimensions were used to determine which could be enhanced to provide the optimal output benefit, and on a larger scale, the greatest challenge faced in competency implementation. The case interviews were structured to further determine six items: (1) degree of executive support, (2) various departmental support, (3) human resource arrangement, (4) funding, (5) professional level of human resources, and (6) others.

B. Individual Case Interview Results

Individual case interviews were conducted. Case 1 was a large hospital located in Changhua, which was a winner of the TNTQA 2013 large-enterprise award. Case 2 was a local hospital located in Nantou, which was a winner of the TNTQA 2013 small- and middle-enterprise award.

Case 1 implemented organizational competency in 2009, with the intention to set newcomer recruitment standards. The implementation took two years to complete, and was funded by a grant of NT$300,000 from the job bank and supported by government-funded counseling. Employees were divided into 27 employment categories, and their performance was measured on a scale of 1–10 by the human resources department. Implementation was initiated in the nursing department, and then extended to all employees of the hospital. Four out of eight dimensions were implemented, including recruitment, education and training, performance management, and employees' career development; job transfers and promotions were constantly applied. Succession planning and overall performance of human resources had not yet been implemented. Ranking the implemented competency items by effectiveness, recruitment was most effective, followed by education and training, and performance management. This was consistent with the original premise of competency implementation at this hospital. The greatest challenges faced during competency implementation process were the support of various departments, followed by executive support. Competency is continually implemented by rotating job duties and linked promotions. Enterprises with the intention of promoting competency should obtain consensus among employees by organizing explanatory meetings and discussions, to increase the success rate and effectiveness of promotions.

Case 2 implemented competency in 2007 to establish (1) basic job specifications and (2) standards for recruitment, and (3) implement performance management system links. First, job descriptions for each job in each department were established. Basic job descriptions and responsibilities were co-established by employees and their supervisors. Learning materials required for each job and level were established by designing learning maps, to evaluate the competency gap between the employee's current abilities and optimal abilities. For performance links, the performance of employees was evaluated through organizational strategic plans and annual management plans. A work emphasis for each department and

a key performance indicator (KPI) for each employee were established; the content and value (occupying 70%) of the KPI and the competency (occupying 70%) the employees should possess was indicated. The methods of evaluation included employee self-evaluation, supervisor reevaluation, and peer evaluation, constituting a 180° evaluation method. Each evaluation item was graded on five levels from A–E. Evaluations were conducted once a season. The unit in charge was the HR department, but the actual leader was the vice president of the hospital. Competency implementation was initially proposed in writing, and was subsequently developed into a competency system with help from the information management office. By integrating working diaries and extended work instructions, and specifying daily, weekly, and monthly tasks, this system architecture facilitated the production of seasonal performance evaluations. The key factors to successful competency implementation were executive support and intradepartmental coordination. The greatest challenge to competency implementation was intradepartmental communication difficulty.

Based on these two individual case studies, Case 1 applied four out of seven dimensions, whereas Case 2 applied five out of seven dimensions in competency implementation (shown in Table 1). The most crucial key factor in the success of competency implementation in both organizations was executive support; evidently, executive support was the primary condition for success. Additionally, departmental coordination and the level of professionalism among personnel were the second and third most important factors, respectively; both cases reached consistent consensus in this regard (shown in Table 2). Both cases also reached consistent consensus regarding the greatest challenge for competency

implementation, which was departmental coordination, followed by executive support (shown in Table 3).

V. CONCLUSIONS AND RECOMMENDATIONS

A. Research Findings and Managerial Implications

According to the research results, competency significantly affected organizational performance. In-depth interviews with Case 1 HR supervisors revealed that the actual factors contributing to the effectiveness of competency implementation were, in order of importance, recruitment, education and training, and performance management. When management established competency standards using the "competency = performance DNA" model, to train recruits and measure performance, an employee performance at the individual case companies correlatively improved. When competency is taken into account during the recruitment process, superior employee performance can be expected.

In-depth interviews with top executives revealed that these executives were familiar with several benchmark supervisors and employees who exhibited exceptional performance. These employees clearly understood their job descriptions, and were able to effectively fulfill their work duties; they were willing to be trained by the the organization; and they did not hesitate to support the long-term development of other employees. By contrast, when these executives discussed employees whose performance could be improved, there was typically a discrepancy between the competency items these employees were able to fulfill, and the competency items the organization intended for them to fulfill, thus resulting in poor performance.

TABLE 1 COMPARISON OF DEGREE OF COMPETENCY IMPLEMENTATION

Project	Case 1	Case 2
Recruitment selection	V	V
Education training	V	V
Performance management	V	V
Career development of employees	V	V
Job transfer or promotion		V
Successor planning		
Overall performance of human resources		

TABLE 2 KEY SUCCESS FACTORS OF COMPETENCY IMPLEMENTATION

Project	Case 1	Case 2
The degree of executives support	1	1
The degree of coordination in departments	2	2
Human arrangement		
Funding problem		
The degree of professional of human resources	3	3

TABLE 3 GREATEST CHALLENGES FACED BY COMPETENCY IMPLEMENTATION

Project	Case 1	Case 2
The degree of executives support	2	2
The degree of coordination in departments	1	1
Human arrangement		3
Funding problem		
The degree of professional of human resources	3	

The competency of employees was evaluated not only by supervisors, but also by colleagues and the employees themselves, who were included in the evaluation process and provided relevant information. The evaluations were semi-detailed in nature but were not completely comprehensive.

Because competition is constantly intensifying, organizational competitiveness is the key to success, and talent is the key factor in competitiveness. Thus, the demand for and development of talent is consistently emphasized, and competency implementation in enterprises has flourished. However, numerous enterprises have blindly attempted to imitate successful enterprise models to implement competency without determining the method appropriate to their industrial characteristics.

This study correlated competency development and organizational performance during the competency implementation process. Following in-depth interviews with top- and mid-ranking executives and experts, the competency implementation and managerial function operations were learned, which are elucidated as follows.

Key success factors in ensuring superior performance in organizational competency implementation:
(1) Recognition and support from top executives
(2) Professional skills and support from HR personnel
(3) Implementation should be fully publicized and communicated, and departmental coordination must be supported
(4) Competency should be linked with HR functions
(5) A method to perform competency evaluation and feedback must be established

B. Research Recommendations

A rigorous literature review and research analysis was conducted. Although objectivity was maintained as possible during the process, because of limited time and human resources, this study has certain limitations. Researchers interested in continuing studies are recommended as follows:
(1) Based on the case company selection standards in this study, four executives at two companies and three experts were interviewed. This was one of the limitations of this study. Future studies should analyze an expanded sample size to increase the reliability and validity of the research.
(2) The subjects of this study were employees at organizations that had been awarded the TNTQA, and the interviews were not comprehensive. The samples were not representative: survey subjects were situated in Central Taiwan and were not representative of the status of all of Taiwan. Moreover, the surveys were conducted by interviews with case company personnel; these personnel were unable to draw analogies to competency in other industries. Future studies should conduct more comprehensive interviews at case companies, and compare multiple enterprises, to increase their study value.

(3) This study was limited to investigating the correlation between competency and organizational performance. Future investigations may include other dimensions for more in-depth discussion.
(4) Because of confidentiality, enforced to maintain the competitive edge of the case companies, this study was restricted from presenting all data.
(5) This was an empirical research study. Results were obtained from expert interviews and in-depth executive interviews. This study put theory into practice. The competency and organizational performance were correlated. This study can serve as a reference to organizations with the intention to implement competency, and for future researchers with an interest in continuing this study.
(6) Future direction of technologic managers and functional management: Through the application of technology, talent evaluation can be done more accurately and conveniently, cultivation of talent can be more in line with business needs, cultivate an environment to developing of ability of all level staffs. At the same time, reaching the goals of enhance the competitive of human resources in enterprises and accomplish organizational performance.

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