APPLICATION OF THE COMPETENCY MODELING APPROACH: DETERMINING THE IDEAL PROFILE OF THE PHYSIOTHERAPIST

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Abstract

Human Capital plays an important role in giving a competitive edge to an organization. The development and use of job competencies to select employees who create competitive advantage is an important feature of the human resource paradigm around the world, particularly in the developed world. A competency model is a collection of competencies that together define successful performance in a particular work setting: in this case a large orthopedic hospital. Possession of appropriate competencies by its workers affects organizational performance and provides a competitive advantage. The research called for both qualitative and quantitative methods of data gathering. The main methods used were the historical method and the analytical survey method. In this study, the units of analysis were core or essential competencies and excellence competencies. The paper examines whether the competency modeling approach is a viable approach to identify both the core and exceptional competencies of physiotherapists. A 3-tier system is proposed and the main roles of physiotherapists are displayed diagrammatically: in the form of a relations diagram consisting of interlocking circles.

Key Words : Human Capital Competency Models Hospital Management Competitive Advantage

Introduction

The Competency Modeling Approach (CMA) is one of the most powerful tools to identify employees with the potential to make an exceptional contribution to the organization. This report describes the results of a research project aimed at investigating whether the Competency Modeling Approach could be applicable in the Indian context. The brief of the research was to test the relevance and validity of the Competency Modeling Approach by applying it to organizations in and around Pune.

To this end a prominent orthopedic institute was selected as the focal entity and the results obtained at this institute were validated by triangulating them with two more orthopedic clinics as well as with a number of independent practitioners in 10 select job positions, medical executives and senior medical managers. A ten-step research process, combining aspects of the historical research method and the analytical survey method, was used to collect and analyze data. The process consisted of (i) raw competency list development, (ii) Likert scale addition, (iii) initial ratings by technical professionals and managers, (iv) competency list validation, (v) competency list finalization, (vi) quantification of the responses,(vii) categorization of identified competencies,(viii) category-wise ranking of identified competencies, (ix) overall ranking of all competencies as core and excellence competencies, and finally (x) definitions and descriptions for each of the competencies, in consultation with expert groups for various job categories.

Ten job positions were selected for in- depth investigation. The research succeeded in identifying two broad competency categories for each of the 10 job positions: core competencies and excellence competencies. On the basis of the ratings given it was possible to propose a three-tier classification of employees starting with the Qualified Professional, then Competent Professional and finally at the top the Mature Professional (Role Model). It was also possible to identify job profile roles and overall the following six job roles were identified on the basis of the competencies: Employee as a Technologist, Employee as a Professional, Employee as a Communicator, Employee as a Trainer, Employee as a Manager and finally the most important excellence role Employee as an Innovator. This article presents details of the competencies identified for the position of a physiotherapist. This paper presents the results for the category of physiotherapists.

Objectives of the Study

The study aimed to find out whether

- detailed competencies could be empirically identified for the position of a physiotherapist
- the competencies so identified could be classified into meaningful categories.
- it was possible to arrive at a model for the

broad classification of physiotherapist roles.

The overall hypothesis was that a high quality health functionary – in this case a physiotherapist, must have competencies in a number of domains. To this purpose research was conducted to explore the cluster of competencies required of physiotherapists. The data collected seemed to support this hypothesis.

Review of Literature

By common agreement it was Harvard University psychologist McClelland (1973) who first initiated the competency movement. McClelland proposed the competency movement as an alternative to the trait (personal characteristics) and intelligence approaches to measuring and predicting human performance. Lucia and Lepsinger (1999) present an interesting note on the background to McCleland's work. The next landmark in establishing the competency movement appears to be Richard Boyatzis (1982). As is well-known, before competency analysis, the technique of job analysis had extensively been used to create job descriptions. Boyatzis realized that when a manager is selected, often he or she is selected on the basis of a mental model (rather than an empirical model) of a "good" manager. All too often, the mental model is unconscious, or implicit. Without realizing it, companies may be selecting managers on the basis of a mental model and this model may bear little relationship to the personal characteristics required for the role. Around 1980 the personnel staff of a company called McBer and Company had developed a technique called Job Competence Assessment Method. This method compared the behaviours of the highly effective staff with those of the less effective or even ineffective staff. Boyatzis was impressed by this technique and decided to present a more refined view. Boyatzis identified 21 competencies using a definition of the term competencies proposed by Klemp (1980). Klemp defines competency as "an underlying characteristic of a person which results in effective and / or superior performance in a job." The concept was further developed by Stark et al (1987), Rowe (1995), Mirabile (1997), Shippman et al (2000), Spector (2001), Spencer and Spencer (2005), Competency Modeling Clearinghouse (2007).

A common element can, however, be discerned in the literature, regardless of the basic paradigm – psychology, psychological testing, vocational, educational, and industrial psychology. The term "competency" defines "successful" performance of a certain task or activity, or "adequate" knowledge of a certain domain of knowledge or skill. It can, therefore, be concluded that there are three common themes to defining the term competency. Competencies must be: (a)factors that contribute in differentiating between high, average and low performers, (b) strategic i.e. must contribute to organizational effectiveness and (c) behaviour based or observable.

It is also clear from the work of prominent thinkers in the field that the CMA is being used for a number of clearly identifiable purposes. D'Aveni, 1994; Hamel & Prahalad, 1994; Sharma and Dietrich 2004; Banerjee,2004 all point out that the CMA can be used by businesses to gain a competitive advantage. Hutton,1994; Wood and Payne,2003 point out that CMA can be used to recruit and train human resource, reflecting Drucker, 1992. Bridges,1995; Lawler, 1993 and a number of others propose that the CMA can be used to cope with changes in the way work is structured. Herriot and Pemberton (1995) suggest that it can be used to deal with the way employee/employer relationships and contractual obligations change. Wood and Payne (2003: Page 5) point out that if organizations want the best, they will have to accept that they must recruit people with different backgrounds, values, attitudes etc. They will have to examine their selection methods to ensure that they are not excluding candidates on the basis of extraneous factors (such as gender) rather than talent, ability or, as we might say, competencies. The Chinese Government initiated in 2002 a "Plan for Strengthening Vocational Training to Improve Employment Qualifications and a National Project for Training Highly Skilled Personnel". A competency approach was used to specify the attributes expected by employers. Curriculum development is an area where the concept of competencies can make the biggest impact. One of the best examples of the use of competencies in curriculum development can be found at the National Institute of Technical Teachers' Training and Research, Bhopal. NITTTR, Bhopal has the first industry-vetted competency bank, based on a research experiment funded by the Government of India.

It can, therefore, be concluded, that there are four common themes that are essential to defining competency. Competencies must be (1) factors that enable an organization to state both the core (minimum) and excellence attributes of employees.

(2) factors which contribute in differentiating between high, average and low performers, and (3) competencies must be strategic i.e. must contribute to organizational effectiveness, and (4) competencies must be behavior based or observable.

So far as competency Modeling is concerned, it can be said that the primary role of the competency model approach is to identify the essential skills, knowledge and personality characteristics needed for successful performance in a job. It is possible to conclude that competency models benefit all partners and stakeholders within what could be termed the *workforce investment system:* business and industry, technical education and training standards bodies, career guidance specialists, educators and training providers, government economic planners, professional organizations, students and their parents.

Constructs

The study has as its basis the following constructs Competencies

- Essential or core competencies
- Excellence competencies

There are three common themes to defining the term competency. Competencies must be: factors that contribute in differentiating between high, average and low performers, strategic i.e. must contribute to organizational effectiveness, behaviour based or observable.

After consideration of the options available, the term *core competency* was adopted for this study. According to Prahalad and Hamel (1990) a core competency is a "bundle of skills and technologies that enable a company to provide a particular benefit to customers" (p. 199). It has also been defined to include assets and processes which add value to the company. The major distinction between the approach of this research and conventional characterizations of core competencies is that in the conventional characterization, the term core competency reflects an organization level competency. While in this research, the same term refers to individual level attributes. Also, the study proposes that at the individual level, core competency refers to an essential or minimum level competency. For instance, a physiotherapist must be able to perform the clinical tasks specific to the position. For the physiotherapist it is a core or essential competency. On the other hand, ability to effectively communicate is an excellence competency. To repeat, the study proposes that the term core competency be used to denote minimum qualifications and competencies a practitioner must possess in order to be considered a member of the profession.

Excellence competencies distinguish an average professional from an exceptional professional. It is important to appreciate that excellence competencies, on their own, do not make a professional. A physiotherapist is not a physiotherapist if he or she cannot perform system specific procedures like manual therapy techniques, and only possesses good communication skills (which belong to the category of excellence competencies). In that sense, excellence competencies are part of a pyramid. The top has no meaning without the base, at which lie core or essential competencies.

Methodology

The main problem is embodied in the following research question: *Is the CMA a viable approach to identify both the core and exceptional employee competencies leading to the success of an Indian business organization?* The following investigative questions were posited, hypotheses proposed for each and data was collected using primary (interviews, questionnaires, site observations) and secondary (literature, institutional records) data collection methods.

- Which industrial sector is appropriate for the study?
- Which medical specialization should be studied?
- Which organization should be chosen as the focus institute?
- What are the various job positions at the focus institute?
- What are the competencies required of the chosen job positions, which includes physiotherapists.
- Interviews with top authorities in the hospitals and a sample of physiotherapists
- Which of these competencies distinguish an exceptional physiotherapist from an average one?
- What is the total competency profile of a job position?

Research Steps

1. Pre-Test

According to Foddy (1993) there are several methods for testing the items in a questionnaire:

- Piloting on a small sample.
- Asking respondents to answer questions and then rephrase them in their own words.
- Ask questions, then ask series of questions

designed to uncover respondent's interpretations of key concepts.

- Have respondents think aloud as they formulate answers to questions.

A pretest of the questions used in the interviews was conducted. A group of industry professionals and academics reviewed wording and comprehensibility. The participants were asked to go through the steps outlined above.

2. Interviews

Interviews are used to uncover specific information from participants who know or have access to the information being investigated. Interviews allow the researcher to acquire more details and greater insight. There are a number of steps to be followed in the interview process. The seven steps of the interview process are thematizing, designing, interview situation, transcription, analysis, verification and reporting. The first step in the interview process was to develop the questions. Questions developed were evaluated thematically and dynamically. Thematically, they had to have relevance to the research theme. The questions were drawn from reviewing literature on the subject matter. Dynamically, they had to promote a good interview interaction. The pre-test assisted in evaluating whether the questions would elicit good responses. The interview is like a conversation but should have a specific purpose and structure. The second step was designing. Interviewees should be informed as to the purpose of the investigation as well confidentiality. A note outlining the ethical code was circulated. The third step was the interview situation and this involved decisions on what type of interaction would take place and how. In this case, the interviewer used questions to direct the subject flow. The last steps of analysis, verification, and reporting were addressed in the data analysis section.

3. Survey

The final data to be collected was from top managers, senior practitioners and middle level managers to test the congruity amongst respondents on competency identification, development, deployment. This data was collected using a survey instrument (questionnaire). All competencies had be identified by insiders. It was theorized that all organizational participants should be using the same strategic game plan. The questions for the survey were the result of a sample consisting of top managers and practitioners identifying competencies and the processes used in their organization. The survey was pre-tested by the executives, managers, practitioners and a group of academics. Respondents were given a list and asked to rate the skills, assets, technologies, and communication processes used to execute competencies in their institution. The measurement technique was a Likert-type scale of 1 to 5. They were also questioned as to which methods are used to communicate, what competencies are important, and what resources are allocated to competency development of workers in question.

4. Documentation for Triangulation

In the case study, additional supporting data is provided through the use of documents. During company visits, documents relating to any of the concepts behind core competencies were requested in addition to the financial data. For example, such documents included but were not limited to:

- Internal communications about recruitment policies and advertisements.
- Memos on assistance/programs to support further education/training and/or competency development;
- Memos on internal quality assurance procedures, if any.
- Newsletters, if any.
- Copies of standard operating procedures that relate to processes for essential operations like surgeries.
- Budgets for education/training and research.
- Training manuals, if any.
- Curriculums of the education wing.
- Research reports by staff
- Annual reports
- Website

Data Analysis

The methods of analysis for this study were both qualitative and quantitative. The data gathered from the interviews was analyzed using qualitative methods. Miles and Huberman (1994:10) defined analysis "as consisting of three concurrent flows of activity: data reduction, data display, and conclusion drawing/verification".

Data Reduction

Data reduction is "the process of selecting, focusing, simplifying, abstracting, and transforming the data" (Miles and Huberman, 1994:10). Various methods can be used, such as writing summaries, coding, writing memos, teasing, themes, etc. In this study, interim case summaries were prepared as the interviews and secondary data were being collected. Summaries were synthesis of what the researcher knew about the case and what remained to be discovered. The summaries were written accounts

with first impressions. Data accounting sheets were also produced. The sheet arrays each question by informant and/or source. As data is accumulated for each question, the source and a synopsis of the data was placed in cells. This assisted in showing where data was missing and, when completed, was used to develop summaries. As an example, the summaries provided a description based on the information received from various informants. The data display sheet indicated that the information had been collected and from whom.

Drawing and Verifying Conclusions

The study had hypothesized that a high quality health functionary must have competencies in a number of domains and to this purpose research was conducted to explore the competencies required of physiotherapists. The data collected seemed to support this hypothesis The following results were arrived at:.

Results and Findings

In the interviews conducted for the purpose of data collection as well as informal interactions during the researcher's site visits, practicing physiotherapists and senior medical practitioners agreed that physiotherapists must have certain important competencies. They also agreed that some competencies were more crucial than the others and that it was these crucial competencies which distinguished an ordinary practitioner from an exceptional one. However, many of them, although intuitively aware, were unable to articulate these competencies. It was only when the researcher was able to interview and discuss with them that their self-understood ideas could be given a shape in words. Also it was only after the list of competencies was circulated that they were able to accept the labels as denoting what they had intuitively understood.

The same phenomenon was observed when the researcher was developing meanings and explanations of the labels. Initially there was considerable disagreement about what many of the labels (i.e. competency names) implied. It was only when draft meanings and explanations were circulated that slowly a consensus emerged.

On the basis of the research, it was possible to propose a 3-tier system of physiotherapist competencies (See Table – 1)

1. Emerging Profile

The term profile is used to demonstrate that a personality is not monolithic but consists of a number of facets. The facets of the profile of a high quality physiotherapist are grouped as follows: technologist, professional, health advocate/trainer, manager, and communicator. The details are as follows:

1. Technologist

The practitioner needs to possess the required qualifications and perform the clinical tasks specific to the position. Some examples are: system specific procedures like manual therapy techniques, prosthetic rehabilitation activities, pulmonary secretion removal and respiration enhancement or application of appropriate modalities like high voltage stimulation; interferential current; functional electrical stimulation; low voltage stimulation; transcutaneous electrical nerve stimulation (tens); mechanical traction; ultrasound ' hot pack; whirlpool/hubbard tank; cryotherapy/cold packs/ice massage .

2. Professional

These refer to profession specific behaviours like securing informed consent, consulting other professionals when necessary, and recognizing one's own limitations.

3. Health Advocate/Trainer

These competencies refer to ensuring that the community of patients received professional advice in a sympathetic manner. Examples include educating the clients and their families, educate the support staff.

4. Manager

Like all professionals, an entry-level physiotherapist would, one day, have to assume managerial responsibilities, which include delegation of responsibilities, supervisory activities as well as more technical managerial skills like systems analysis, system evaluation, human resource management, resource management.

5. Communicator

As pointed out earlier, expert respondents belonging to the profession as well as medical managers emphasized good communication skills as the most important excellence competency. Examples include: willing to communicate knowledge and experience through formal and informal means, maintain proper documentation, clear instructions to patients and carers and explaining procedures in a reassuring manner.

The five categories are demonstrated in Diagram 1

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Diagram-1

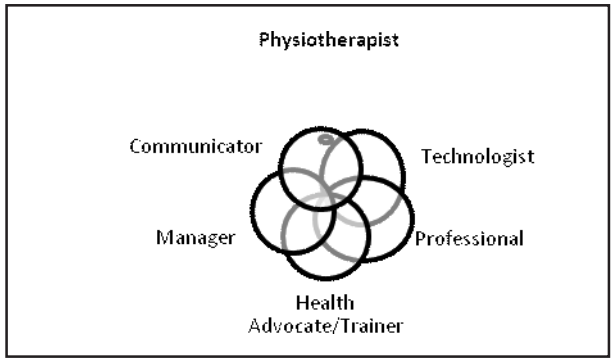

Table-1

	Tier	
1	Qualified Professional	This person has the required professional qualifications and can perform all the **basic tasks** that any physiotherapist should be able to perform.
2	Competent Professional	This person is above the qualified professional in that he or she possesses additional competencies.
3	Mature Professional / Role Model	This person has all the professional qualifications plus extra competencies that mark him or her as belonging to the **excellence tier**. Such persons bring competitive advantage to the organization.