

## Health Workers and Response to Changes in Technology in Nigeria: The Role of Competence Management.

### Author's Details:

<sup>(1)</sup>**Emerole .B. Okwudili (PhD)**-Department of Human Resources Management Michael Okpara University of Agriculture, Umudike Umuahia, Abia State, Nigeria.

<sup>(2)</sup>**Oge Mounanu (PhD)**-Department Of Business Management Godfrey Okoye University Ugwu-Omu Nike, Enugu State, Nigeria

<sup>(3)</sup>**Agbaeze, E.K (PhD)**-Department of Management University of Nigeria, Enugu Campus, Enugu, Enugu State, Nigeria

### Abstract

*Organizational effectiveness is critical to success in any economy. In order to achieve increased and sustainable results, organizations need to execute strategy and engage employees. To create organizational effectiveness, business leaders need to focus on aligning and engaging their people, management systems, structure and capabilities (including organizational culture) to the strategy. This paper examined how health workers respond to changes in technology adopting competence management in enhancing organisational effectiveness. The result revealed that external environment of the organisation occasioned by changes in modern technology in health management assist in the enhancement of competency which leads to organisational efficiency. We therefore recommend that the use of modern technology as a means of achieving competency which leads to enhanced organisational efficiency should be rigorously pursued by government as well as management.*

**Keywords:** Health Institutions, Technology, Competence Management

### 1.0 Introduction

For many years there has been a generally improving trend in health and safety performance both at work and in terms of public safety. However, people at work and the general public continue to demand further improvements. This improvement has been reinforced by legislation in several countries concerning health safety. Historically, there have been huge improvements through technology and significant improvements in safety management processes and procedures. More recently attention has been focused on the benefits to be obtained from improvements in understanding and managing human factors which are the most important resources in an organizational setting. Mostly, these approaches attempt to match knowledge and skills of individual employees to present and future demands of the organization.

However, important questions that one has to deal with include: how do we identify and describe knowledge and skills that are required from our workforce; how do we assess what knowledge and skills people have; how do we use this information to reach the goals we have set out on an individual and organizational level? Worrysome, also, is the issue of transferability of individual competence to organizational competence and the ability to ensure that these competencies are developed and managed in such a way that will help the organization cope with complex situation, solve problems or come up with creative new solutions.

It has been observed that most health employees in Nigeria lack competency and this have resulted in loss of patients. There has not been any research in this area based on the importance of competency on organisational effectiveness of health personnel. Given the definition of organizational competence as the existence of multiple stakeholders and the importance of meeting the expectations of all providers of essential resources in sustaining the value-creating processes of an organization it is however observed that this is hardly the case in Nigeria, especially in health management institutions when a high level of competence is required; Therefore, the lacuna which this study seeks to fill is to examine the how health workers respond to technological changes applying the principles of competence management in federal health institutions in South East of Nigeria.

This paper is further divided into four sections. In the next section literature on competence management will be examined. In section three, the methodology used will be presented. In section four, we presented and analyzed our data while we conclude in section five.

### 2.0 Review of Related Literature

#### 2.1 Origin of Competence Management

The term competence was probably first introduced to literature in 1973 when David McClelland argued in his article 'Testing for competence rather than for intelligence' that traditional tests of academic aptitude

and knowledge content in fact predicted neither job performance nor success in life. Thus, the quest for theory and tools that could reliably predict effectiveness in the workplace began (McClelland, 1973). In 1982 it was Boyatzis who first drew together comprehensive data that had been collected in the USA using the McBer & Company 'Job Competence Assessment' method. Since then, competency has become a significant factor in human resource development practices (Simpson, 2002).

The word competency comes from a Latin word meaning "suitable" (Bueno and Tubbs, 2004). Boyatzis (1982:97) defines a competency as "an underlying characteristics of a person which result in effective and/or superior performance in a job". According to Boyatzis (1982) a job competency represents ability. An individual's set of competencies reflect their capability or what they can do. A job competency may be a motive, trait, skill, aspect of one's self-image can do. A job competency may be a motive, trait, skill, aspect of one's self-image or social role, or a body of knowledge that an individual uses, and the existence and possession of these characteristics may or may not be known to the individual. Similarly, Mitrani et al., (1992) state that competencies could be motives, traits, self-concepts, attitudes or values, content knowledge, or cognitive or behavioural skills.

The purpose of a competence management system (CMS) is to control in a logical and integrated manner a cycle of activities within the company or organization that will assure and further develop competent performance in work. The aim is to ensure that individuals are clear about the performance that is expected of them, that they have received appropriate training, development and assessment, and that they maintain or improve their competence for the individual or team, sufficient to allow individuals or teams to undertake the operation at a basic level. Initially this will be under direct supervision, which will become less direct (Sandberg, 2000:9). Over time as knowledge and practical experience grow, operations can be carried out at a more complex level. Such an approach will also increase the confidence of the individual or team to deliver competent performance, while making them aware of their limitations. Assessment (and reassessment) is how judgments are made that the inputs (i.e. training, development and experience) have been understood sufficiently to deliver outputs (i.e. in terms of competent performance and safe operation). Competence can be seen as a continuum with people at various stages along it such as novice, not yet competent, competent, proficient and expert.

Competence is a broad, multidimensional concept. There has been much work in competency, and unfortunately this has led to some confusion of the definition, and adding to the complexity for research involving competency. Considering the importance of health sector employees in managing the health of any society, it is therefore expected that they exhibit a high level of competency. The ability of health workers to show proficiency is essential in instilling confidence on their patients.

## **2.2 Meaning of Competence Management**

Competent employees are the main resource of any organization in acquiring a competitive advantage. Land, buildings or materials do not yield company productivity, rather, it is 'people capital' that runs a business and produces value from existing resources. Hay Group (2004) point out that an organization's best source of competitive advantage lies with its employees. Strategies, business models, products and services can all be copied by competitors, but talented and competent employees represent a sustainable source of differentiation. The demand for effective and competent employees continuously increases in both public and private organizations because a dynamic global marketplace and increasing foreign competition has compelled organizations to become more effective and flexible in response to the rapidly changing environment. As a result, this is a suitable time to assess human resource management (HRM) practices that can augment organizational performance in public sector organizations. Organizations try to increase their capabilities by investing more in training and management development and Ichniowski et al., (1996:299-333) state that HRM practices have a greater effect on organizational performance than on individual performance. Moreover, human resource development encourages competency development by forming opportunities within the organization for employees to develop their competencies for both their own benefit and the benefit of others (Rao, 2000:34; Rodrigues and Chincholkar, 2005:6-20).

The competency-based approach has become integral in HRM during the last thirty years and, currently, different organizations, businesses and public services use competency models to better integrate global trends and business strategies with their human capital resources. Competency encompasses the knowledge, skills, abilities, traits and behaviors that allow an individual to perform a task within a specific function or job. In accordance with this approach, competencies are used as the basis for human resource management. Carretta (1992:15) suggests that the best way of matching people

and jobs is through the use of competency modeling. Competency models help organizations to take a more unified and coordinated approach in designing improvements to HRM systems, including job redesign, recruitment, organizational learning, career management, performance improvements and compensation systems (United Nations Industrial Development Organization, 2002). In implementing effective HRM the introduction of competency building programs for each job or task should be considered, as an employee's competencies are usually linked to their job and, hence, to organizational performance.

Therefore, improving employee competencies would improve both job and organizational performance and an organization needs to hone the competencies of individual employees to support a competitive strategy. From the wide range of related literature, the definition of competency can be summarized as an underlying characteristic of an individual that is causally related to criterion-referenced effective and/or superior performance in a job or situation. Job competency is a set of behavior patterns that a job incumbent needs to bring to a position in order to perform its tasks and functions with competence. A job competency can be a motive, trait, skill, self-concept, body of knowledge or an attribute that allows an individual to perform a task or activity within a specific function or job. Skill and knowledge are surface or technical competencies that can be developed easily by training. On the other hand, motives, traits and self-concept are hidden or behavioral competencies that are difficult to develop. Traditionally, it is essential for an individual to possess the required technical competencies at a threshold level in order to adequately perform their job. However, the changing environment and diverse workforce has resulted in behavioral competencies becoming crucial as the greatest determinants of an individual's performance. Thus, in order to be effective in a job, individuals need to possess or acquire both technical and behavioral competencies and use these together in performing their tasks.

The value of competency has been widely explored. For example, in the 1990's the LBA Consulting Group conducted a study that focused on identifying the factors that most contributed to the creation and sustenance of organizational excellence. The study examined organizations that had survived and prospered, and those that had failed, over a 25-year period. The results of the study suggested that six human resource conditions have to be met. These conditions were a performance-oriented culture, low turnover, high levels of employee satisfaction, a cadre of qualified replacements, effective

investment in employee compensation and development, and the use of institutional competencies (success factors) in employee selection and performance evaluation processes (Berger and Berger, 2004:12).

Mitrani *et al.*, (1992:16) mention the need for competency and predict that organizations of the future will be built around people. They add that there will be less emphasis on jobs as the building blocks of an organization; instead increased attention will be focused on employee competence. If we are using people as the building blocks of an organization, then competence or what they bring to the job becomes crucial. The competency approach to selection and assessment is based on classifying, identifying, and measuring individual differences for particular work-related constructs that are relevant to successful job performance (Bartram, 2004:237-259). Cummings and Worley (2001:13) similarly state that organizational changes frequently demand new knowledge, skills and behavior from employees. They argue that in many cases changes could not be implemented unless employees gained new competencies. They also suggest that change agents are needed to provide multiple learning opportunities, such as traditional training programs, on-the-job counseling and coaching, and experiential simulations, covering both technical and social skills, and that it must be ensured that such learning occurs.

### **2.3 Organizational Learning and Competence Development**

Organizational learning may be seen as an alternative response to the challenges faced by businesses, in order to develop an ongoing learning ability from organizational experiences and translate that knowledge into practices that contribute to a better performance, making the company more competitive. Therefore, organizational learning has the basic premise of permanently developing strategies and proceedings in order to reach better results; it counts on people's effective participation in the process of acquisition and dissemination of knowledge, which directly relates to competence development.

Besides the "complicity" existing between both approaches, that relationship has not been made clear enough. This section will include some works developed by organizational learning researchers within the managerial competence development approach. The questions presented are a personal construction, aimed at contributing to the discussion and not to its end. David Kolb's (1971:533-575) approach is focused on the Experiential Learning Cycle. This study presents the process view regarding learning and competence

creation, highlighting the importance of action and reflection in an ongoing process aimed at balancing actions and abstractions shown in the cycle.

Argyris (1992:45), in turn, puts forward the debate on the gap between exposed theory and in use theory (discourse and practice). The need to consider competences as practices seen in the work environment is then verified, which distinguishes it from potential development. Argyris also points to the importance of (re)thinking the process of competence development based on mistakes, thus allowing double loop learning avoiding the development of skilled incompetence.

Senge (1990:112), based on the development of Five Disciplines, indirectly approaches the issue of competence. Personal Mastery may thus be interpreted as the need to develop people based self-knowledge, that is, self-development. Mental Models are related to reflection-in-action, in which usual practices at work are challenged, seeking to add value to the company's activities based on a more critical and creative stance. Team Learning restores the importance of interaction as a process of developing collective and individual competences as well as a Common or Shared Vision. It also points to the need to elaborate on each organization's specificities, and shows the narrowness of the view that sees competence as a list of attributes. Systemic Thinking, in its turn, highlights the importance of the process view as opposed to the event centered view based on formal training sections for development and formation of managers.

There is also the need to balance individual and collective practices as well as formal and informal ones, in order to develop the organization and its managerial competences. According to Leonard-Barton (1995:77), competence must be seen as a system. It is very difficult to think of individual competences since individuals are in a permanent relational process (mutual interplay). The author also stresses that formal and informal procedures are crucial for that human interaction and serve as a basis for building competences. According to Sitkin (2000:22), the most effective organizations shown in the literature are those that integrate formal and informal control practices.

#### **2.4 Performance and Competency Management**

Management performance is the extent and quality of managers' contributions in realizing the objectives of their unit and organization. Cockerill (1989:55) suggests that this is related more to the managers themselves than to their positions and authority within the organization. Hence, managers' performance depends not only on

their experience (seniority) as the traditional and bureaucratic organizations seem to stress, but the competencies they bring into their job. Competencies are defined as the cognitive (e.g. knowledge and skills), affective (e.g. attitudes and values), behavioral and motivational (e.g. motivation) characteristics and dispositions of a person which enables him or her to perform well in a specific situations (Ley, 2006:57; Boyatzis, 1982:23). Finn (1993:45-68) argues that managers' performance (output competencies) is influenced by their attributes that include task-related knowledge and experience (input competencies), and personality characteristics (process competencies). This means that objective factors such as experience and technical abilities, which were the key determinants of performance in mass production economy of the past, are not sufficient for effective performance today.

An increasingly competitive world with its emphasis on technology and knowledge workers highlights the importance of factoring in intangible capacities that are more value-driven and behavior-based (Sveiby, 1997:1-32). Hence, competency-based management approach was a response to inadequacy and ineffectiveness of job analysis techniques in selecting, training and developing managers. It shifted the focus from jobs to people who perform them. Some of the key competencies that have been found to correlate with effective management performance include: 1) analytical thinking (Spencer and Spencer, 1993:1-22), conceptualization (Schroder, 1989:22-45), concern with impact (Schroder, 1989:22-45), proactivity (Schroder, 1989:22-45), achievement-orientation (Dulewics, 1989:1-59), communication (Schroder, 1989:22-45), interpersonal sensitivity (MCI, 1993), teambuilding (Spencer and Spencer, 1993:1-22), self-confidence (MCI, 1993).

Future competencies are individual's characteristics that are perceived to link to performance in the future. One approach to determine future competencies is to forecast future trends in business from which the future competencies are derived. Forecasting a future is in the realm of future studies; a field of inquiry that uses current knowledge and trends to forecast the future. Bolling (1996:34) defines the art of forecasting as the collection of many lists of guesses and the construction of a scenario to predict the future. Slaughter (1996:1-45), on the other hand, describes futurists as alternative seekers, not forecasters. He suggests that looking ahead allows the society to influence future decisions and actions, prevent things to go wrong, and increase informed optimism and empowerment. In this context, the study of future is a dynamic and proactive process

with the aim of making the transition from present to future as informed and stable as possible.

Seeing the future may be valuable but not simple. It is characterized by constant change and chaos and therefore difficult to hypothesis with an acceptable degree of accuracy. The greatest challenge in predicting the future is how to deal with complexity that is associated with size, variety and difficulty (Frame, 1994:33-64). Clearly, as the world becomes more complex and chaotic, more exogenous or unexplained variables enter the analysis that inevitably contaminates attempts to predict the futures. In addition, several other factors complicate future studies. First and foremost is time (Slaughter, 1999:1-45; Howe, 1993:1-235). How the future is interpreted depends on what time frames and point of reference are used. The longer the time scale, the more complicated and unreliable is the forecasts. Secondly, future studies are culture-bound. Different societies have different value systems and beliefs which influence the assumptions people make about the futures (Howe, 1993:1-235; Wagar, 1991:1-167). So future studies and forecasts depend on how, why and what of forecasts and who the forecasters are, thirdly, since assumptions and extrapolations about the futures cannot be separated from one's personal views, religious convictions and cultural values, some forecasters may be tempted to moralize future events. Hence, it is critical for forecasters to use their intuitive and extrapolative skills to predict what the future will be, rather than what the future should be. Fourthly, given the speed of knowledge generation and its increasing interdependencies, forecasters should have interdisciplinary orientation to be able to cope with uncertainty and conflicting evidence and still derive useful conclusions. Finally, forecasting is more an art than a precise science. It relies on conjectures, intuition and complex thought processes which are seldom in the realm of quantitative methodology or amenable to statistical manipulations. Wagar (1991:1-167) argues for 'suitability of methods' when forecasting the future. He dichotomizes the methods used in futures studies into 'hard' and 'soft', corresponding to the distinction between the so called exact sciences perspective and the humanities perspective.

These problems, albeit real and important, has not deterred futurists, government agencies and practitioners from wanting to know about what is likely to happen in our planet, organizations, schools and homes in the near or distant futures. In particular, Toffler, Drucker, Handy, and Naisbitt have written extensively on organizational and managerial issues in the 21st century. An analysis of the major future forecasts, either by frequency of

concepts used by forecasters to describe the future, or content analysis, reveals several key futures concepts. Identifying these concepts, as argued by Slaughter (1999:1-45), enables a future discourse. This means that useful futures concepts should be developed so that they can be used and understood by people at different levels.

An analysis of future forecasts highlights the importance of three interdependent business subsystems. At the market level, the business success is increasingly depended upon its ability to adopt intelligent approach that involves understanding customers' diversity and its implications upon market demand and the supply of company's required resources (Frame, 1994:33-64). In a customer-focused business environment, organizations require radically a different mindset, strategy and management skills from what was the norm in the stable and supply-constrained environment of the past.

At organization level, there is a growing belief that the continuing technological innovation, the primacy of customer and knowledge, the changing values and working habits of the knowledge society demand different organizational form and emphasis. Such a structure is characterized as being responsive, flexible and cross-activity oriented. To achieve responsiveness and flexibility, organizations should bring decision making processes closer to work and people who influence work and customers. The most appropriate form of organizations to enhance the interface between external and internal customers uses a network structure (Drucker, 1991:1-172; Toffler and Toffler, 1997:1-109; Bennis, 1997:129-148; Karpin, 1995:1-38). Limerick and Cunnington (1993:1-89), in their review of the literature, found that network organizations have loosely coupled networks and alliances, in which units are responsive to each other but retain separateness and their own identity. This requires management to promote empowerment and collaborative individualism.

At the resource level, particularly as related to human resources, it is argued that the ability to learn faster than one's competitors is essential for business competitiveness and success. Senge (1990:42) describes the learning organization as an organization where knowledge workers are characterized by their generative capacities for change and self-renewal. This highlights the constancy of change and deduces that continuous learning is a logical response to minimize uncertainty and risks. Learning organizations create continuous learning opportunities, encourage collaboration and team learning, learn from their past mistakes experiences, promote inquiry and dialogue, and empower people toward a collective vision. It should be noted that no

claim is made here to suggest that the proposed factors of competitiveness are either new or exclusively future-specific. As Drucker (1999:1-172) points out, the changes, particularly in areas such as quality improvement and customer service, are already being felt in the business world with the prediction that their impacts will accelerate in the future.

**3.0 Methodology**

The descriptive survey method of research was used for this study and the primary data source was used to collate data. For this study, we used questionnaire as the instrument for collection of primary data. The researcher designed the questionnaire in a structured form. The structured questions provided respondents with possible answers and asked that the respondents select those that apply.

The population of this study comprises of all federal health institutions in each state of the South East of

**Table 3.1 Total Population of the Study**

	<b>Teaching Hospital</b>	<b>No of staff</b>
1	University of Nigeria Teaching Hospital, Enugu	732
2	Federal Medical Centre, Umuahia	394
3	Federal Medical Centre, Abakaliki	473
4	Nnamdi Azikiwe University Teaching Hospital, Awka	602
5	Federal Medical Hospital, Owerri.	534
	<b>Total</b>	<b>2735</b>

**Source, Field survey, 2015**

Using the Taro Yamani formula to determine the total sample of staff, it was determined with the formula below:

$$n = \frac{N}{1 + N(e)^2}$$

Where,

n = Sample

N = Population = 2735

e = error of tolerance = 0.05

1 = statistical constant

**Therefore,**

$$\begin{aligned}
 N &= 2735 \\
 e &= 5\% \text{ or } 0.05 \\
 n &= \frac{2735}{1 + 2735(0.05)^2} \\
 &= \frac{2735}{1 + 6.836} \\
 &= \frac{2735}{7.836}
 \end{aligned}$$

Nigeria. The population from which the sample responses were generated comprised medical and non medical personnel of these health institutions. They include University of Nigeria Teaching Hospital, Enugu, Federal Medical Centre, Umuahia, Federal Medical Centre Abakaliki, Nnamdi Azikiwe University Teaching Hospital, Awka and Federal Medical Hospital, Owerri.

The accuracy of statistical inference based on sample depends on the adequacy of samples and sampling method. The problems of estimating the characteristics of a population would be very simple if the data were uniform and having the same pattern as the population (Monga, 2005:12). Since it was impossible for the researcher to reach the entire population, the Taro Yamani formula was used to determine the sample size for this study. The Taro Yamani sampling techniques is used when the population is finite and known. Thus the table below represent the sample.

= 349 respondents

The total sample size therefore this study was three hundred and forty-nine (349) medical and non medical staffs of teaching hospital in South-East Nigeria.

Validity refers to how well a specific research method measures what it is supposed to measure. To increase validity for this research, we interviewed both medical and non-medical staff of the teaching hospitals visited. A research holds reliability if it can be repeated several times and the result are the same or almost the same. To test for the reliability of the instrument, the Pearson Moment Correlation was used to ensure consistency using the total population sample of the teaching hospitals. A correlation above 0.5 indicates reliability while a correlation coefficient below 0.5 indicates no reliability. The table below is an extract of the SPSS results.

**Table 3.2: Model summary**

Model	R	R-square	Adjusted R-Square	Std Error of the estimate
1	0.807 <sup>a</sup>	0.798	0.791	1.012

**Source: Field Survey, 2015**

R is correlation coefficient and it is 0.807 which is close to 1. Thus, the instrument used was reliable.

This study’s main constructs is to examine how health workers respond to changes in technology adopting competence management in South Eastern State of Nigeria. This was measured through the use of Likert-scales questionnaire as opposed to the demographic variables (income, age, and gender) whose questions delivered only nominal data. The basic scale design therefore consisted of a Likert-scale with five scale points. For presentation and data analysis, tables and percentages was used to summarize the data gathered for clarity and comprehension Chi-square statistic was used to test the hypothesis.

**4.0 Presentation and Analysis of Data**

**4.1 Presentation of Data**

This section is divided into two sections. The first section is the presentation of data and analyses, while the second section involved testing the hypothesis using chi-square. For clarity sake, a total of three hundred and forty-nine (349) respondents were sampled comprising, medical and non-medical staff of the five (5) Teaching Hospitals in South East Nigeria. The analyses were based on responses from staff of these hospitals.

**Table 4.1: Response Rate from Respondents**

Details	Number Administered	Number returned and used	Percentage Questionnaire Administered
Medical Staff	175	169	50.6%
Non Medical Staff	174	165	49.4%
<b>Total</b>	<b>349</b>	<b>334</b>	<b>100%</b>

**Source: Field Survey, 2012**

From the table 4.1, it was revealed that one hundred and sixty-nine (169) and one hundred and sixty-five respondents from the medical and non-medical staff groups respectively of the teaching hospitals visited filled and returned the copies questionnaire. This represented approximately fifty-one (51%) percent and forty-nine (49%) percent response rate. Therefore, the sample size utilized in this study is three hundred and thirty-four (334).

**Table 4.2** Health personnel responds to the changing patterns of technology

Extent	Medical Staff	Non-Medical Staff	Total	Percentage (%)
Very High	96	75	171	51
High	43	57	100	30
Very low	1	2	3	1
Low	3	9	12	4
Moderate	26	22	48	14
<b>Total</b>	<b>169</b>	<b>165</b>	<b>334</b>	<b>100</b>

Source: Field Survey, 2012

From table 4.2, it was revealed that ninety-six (96) and seventy-five (75) respondents from medical and non-medical staff of the teaching hospitals say that health personnel respond to the changing patterns of the organization’s external environment due to technology at a very high extent. This represented a total of one hundred and seventy-one (171) respondents which translated to fifty-one (51) percent of respondents. Forty-three (43) medical and fifty-seven (57) non-medical staff of these teaching hospitals say that health personnel respond to the changing patterns of the organization’s external environment due to technology at a high extent. This represented a total of one hundred (100) respondents and thirty (30) percent of respondents. One (1) medical and two (2) non-medical staff of the teaching hospital say that health personnel respond to the changing patterns of the organization’s external environment due to technology at a very low extent. This represented a total of three (3) respondents and one (1) percent of respondents. Three (3) medical and nine (9) non-medical staff say that health personnel respond to the changing patterns of the organization’s external environment due to technology at a low extent. This represented a total of twelve (12) respondents and four (3) percent of the respondents. Lastly, twenty-six (26) medical and twenty-two (22) non-medical staff of the teaching hospitals say that health personnel respond to the changing patterns of the organization’s external environment due to technology at a moderate extent and this represented a total of forty-eight (48) respondents and fourteen (14) percent of respondents.

**4.2 Test of Hypothesis**

**Step One: Restatement of Hypothesis in Null and Alternate Forms:**

**H<sub>01</sub>:** Health personnel do not respond highly to the changing nature of health management technology in Nigeria

**H<sub>a1</sub>:** Health personnel respond highly to the changing nature of health management technology in Nigeria

**Step Two Analysis of Result of Hypothesis**

**Table 4.3 Chi-Square Test**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.1926(a)	8	.000
Likelihood Ratio	21.4662	8	.000
Linear-by-Linear Association	12.6069	1	.000
N of Valid Cases	334		

Source: SPSS Results (See Appendix)

From the table, it indicates the  $X_c^2 = 21.19 > X_t^2 = 20.2$  at 95% significance and 8 degrees of freedom. The probability  $p = 0.000 < 0.01$  indicating that health personnel response to health management technology is very high in teaching hospitals in the South East.

**Decision**

The null hypothesis is rejected while the alternate hypothesis accepted. Thus health personnel respond highly to the changing nature of health management technology in Nigeria

**5.0 Conclusion and Recommendation**

Competency encompasses the knowledge, skills, abilities, traits and behaviors that allow an individual to perform a task within a specific function or job. This is enhanced through health personnel ability to response to the changing needs of the environment especially the role that technology plays in achieving competency which leads to enhanced organisational efficiency. Carretta (1992:15) suggests that the best way of matching people and jobs is through the use of competency modeling which can be achieved through the process of incorporating the use of modern technology in the management processes of the organisation. Thus in line with works of Carretta (1992:17) United Nations Industrial Development Organization (2002:1-167). It was revealed in this study that the external environment of the organisation occasioned by changes in modern technology in health management assist in the enhancement of competency which leads to organisational efficiency.

Organizational effectiveness is critical to success in any economy. In order to achieve increased and sustainable results, organizations need to execute strategy and engage employees. To create organizational effectiveness, business leaders need to focus on aligning and engaging their people, management systems, structure and capabilities (including organizational culture) to the strategy. The increase in organisational efficiency results from an enhanced competency of both management and employees of the organisation hence this study sought to examine the impact of competency on organisational effectiveness of health institutions in Nigeria adopting competency enhancement indicators such as improvement in health management technology, training and retraining of health personnel and achievement of the core objectives of the organisation.

There is no gainsaying that competency is important in enhancing organisational effectiveness as indicated from the results of this paper. Therefore, we recommend that the use of modern technology as a means of achieving competency which leads to enhanced organisational efficiency should be rigorously pursued by government as well as management.

## References

- 1) Argyris, C. (1992), *On Organizational Learning*, Massachusetts: Blackwell Publishers
- 2) Bartram, D. (2004), "Assessment in Organizations" *Applied Psychology: An International Review*.
- 3) Bennis, W. (1997), "Becoming leader of leaders", in Gibson, R. (Ed.), *Rethinking the future*, London: Nicholas Brealey Publishing
- 4) Berger, L., and Berger, D. (2004), *The Talent Management Handbook: Creating Organizational Excellence by Identifying, Developing, and Promoting Your Best People*, New York: Mcgraw-Hill
- 5) Bolling, G. F. (1996), *The art of forecasting*, California: Gower
- 6) Boyatzis, R.E. (1982), *The competent manager: A model for effective performance*, New York: John Wiley & Sons
- 7) Bueno, C. and Tubbs, S. (2004), "Identifying Global Leadership Competencies: An Exploratory Study" *Journal of American Academy of Business*
- 8) Carretta, A. (1992), "Career and Succession Planning" In: Mitrani, A., Dalziel, M., and Fitt, D. *Competency Based Human Resource Management*, New York: HayGroup
- 9) Cockerill, T. (1989), "The kind of competence for rapid change", *Personnel Management*, September
- 10) Cummings, T., and Worley, C. (2001), *Organization Development and Change*, Ohio: South-Western College Publishing
- 11) Drucker, P.F. (1999), *Management challenges in the 21st century*, Boston: HarperCollins Publishers
- 12) Drucker, P.F. (1991), "Drucker in the Harvard Business Review", *Harvard Business Review*
- 13) Dulewicz, V. (1989), "Assessment centre as route to competence", *Personnel Management*
- 14) Finn, R. (1993), "A synthesis of current research on management competencies", *Henleyon-Thames*, Henley Management College
- 15) Frame, J.D. (1994), *The new project management: Tools for an age of rapid change, corporate engineering, and other business realities*, New York: Jossey-Bass
- 16) HayGroup. (2004), "Hay Resources Direct" (Assessed on 12/02/12 <http://www.hayresourcesdirect.haygroup.com/Competency/Assessments>)
- 17) Howe, L. (1993), "Predicting the future", in *Predicting the future* by Howe, L. and Wain, A. (Eds.), Cambridge: Cambridge University Press
- 18) Ichniowski, C., Kochan, T.A., Levine, D., Olson, C., and Strauss, G. (1996), "What Works at Work: Overview and Assessment" *Industrial Relations*

- 19) Karpin, D. (1995), "Enterprising Nation: Renewing Australia's managers to meet the challenges of the Asia-Pacific century", *Australian Government Publishing Service*
- 20) Leonard-Barton, D. (1995), *Wellsprings of Knowledge*, Cambridge and Boston, MA: Harvard Business School Press
- 21) Ley, T. (2006), "Organizational competency management: A competency performance approach", Unpublished PhD dissertation: *University of Graz, Graz*
- 22) Limerick, D. and Cunnington, B. (1993), *Managing the new organization*, Sydney: Business and Professional Publishing
- 23) McClelland, D. C. (1973), "Testing for competence rather than "intelligence", *American Psychologist*
- 24) MCI (1993), "Introducing management standards" *National Forum for Management Education and Development*, London
- 25) Mitrani, A., Dalziel, M., and Fitt, D. (1992), *Competency Based Human Resource Management*, New York: HayGroup
- 26) Rao, T.V. (2000), *Human Resource Development – Concept and Background, Human Resources Development: Experiences, Interventions and Strategies*, New Delhi: Sage Publications
- 27) Rodrigues, L. L. R., and Chincholkar, A. M. (2005), "Benchmarking the HR Practices of an Engineering Institute with Public Sector Industry for Performance Enhancement" *International Journal of Training and Development*
- 28) Schroder, H.M. (1989), *Managerial competence: The key to Excellence*, London: Kendall and Hunt
- 29) Senge, P.M. (1990), *The fifth discipline: The art and practice of the learning organization*, New York: Doubleday & Currency
- 30) Sitkin, S. (2000), "Sequencing Control System Adoption and Adaptation", *University of Queensland, Research Seminar Series, Graduate School of Management: Brisbane*
- 31) Slaughter, R. A. (1996), *New thinking for a new millennium*, London: Routledge
- 32) Spencer, Jr., L.M. and Spencer, S.M. (1993), *Competency at work: Model for superior performance*, New Jersey: John Wiley & Sons
- 33) Sveiby, K.E. (1997), *The new organizational wealth*, San Francisco: Berrett & Koehler
- 34) Toffler, A. and Toffler, H. (1997), *Foreword, in Rethinking the future*, London: Nicholas Brealey Publishing
- 35) United Nations Industrial Development Organization (2002), *UNIDO Competencies*  
Assessed on 12/02/12 <http://www.unido.org>
- 36) Wagar, W.W. (1991), *The next three futures*, San Diego: Adamantine Press Limited