



Perceived Influence of Structural Capital Management on Teaching-Learning Process in Public Junior Secondary Schools in Port Harcourt Metropolis, Rivers State Nigeria

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ABSTRACT

The study investigated the influence of structural capital management on teaching learning process in public secondary schools in Rivers State. Two research questions guided the study and two hypotheses were tested at 0.05 level of significance. The study adopted a descriptive survey design. The population of the study comprised 845 teachers consisting of 229 males and 616 females in the 36 public junior secondary school in Port Harcourt metropolis, Rivers State. A sample of 422 teachers consisting 114 male and 308 female teachers was drawn through simple random techniques. This represented 50% of the entire population. The instrument for data collection was a self-designed instrument titled “Influence of Structural Capital Management on Teaching-Learning Process” The instrument was face and content validated by the researcher’s supervisor and two experts in the Department of Management and Evaluation and Educational Management. The instrument was pre and post-tested and reliability indices of 0.72, 0.73, 0.67 and 0.75 was obtained using Cronbach Alpha Statistics. Mean and standard deviation were used to answer the research questions, while z-test statistics were used to test the null hypotheses at 0.05 level of significance. The findings revealed among others that organizational capital management influence teaching and learning process through Parents Teachers Association meetings to provide the platform for parents and teachers to share ideas that will improve teaching and learning, feedbacks are used by school managers to communicate to parents on their ward, defined channel of communication between the school management and parents, open day activities provides parents the opportunity to interact with teachers and their wards and suggestion boxes place around the school environment enable the parents and students to drop their request. The study recommended among others that school management should ensure that they build good relationship with its customers (parents and students) in order to improve teaching-learning process.

Keywords: Structural Capital, Management, Teaching, Learning, Process,, Public, Secondary school.

INTRODUCTION

Structural capital refers to the knowledge repository of all non-human resources in an organization. An organization mainly accumulates structural capital from their organizational structures, practices, information systems, and manuals. Structural capital is a strategic asset which is comprised of non-human assets such as systems and programs, research and development and intellectual property rights these sub variables helps the organization to achieve its goals and objectives hence improved Business Performance. Ulabor (2016) define structural capital as the hardware, software, databases, organizational structure, patents, trademarks and everything else that employees use to support their business activities

and processes that will finally lead to an effective competition among other organizations. There is no doubt structural capital plays a crucial role in the current ever-challenging and aggressive business environment, particularly in knowledge-intensive organizations such as pharmaceutical industry. The organizations that aspire to be successful and competitive need to demand and find better ways to improve their business performance by utilizing their structural capital.

An effective and efficient management of non-human re-sources contributes tremendously to effective teaching learning process. Education is an instrument that builds individuals with knowledge relevant for development and nation building. Federal Republic of Nigeria (FRN) in her National Policy on Education (FRN, 2013) stated that junior secondary education is the education which a child receives immediately after primary education. Children in this level of education are between the ages of twelve to fifteen. This level of education is the foundation for inculcating social values, norms, ideas and personal habits which prepares a child for adolescent. A key element towards effective teaching learning process on this level of education is proper management of non-human resources.

Structural capital essentially comprised of three primary types of capital, namely: organisational capital, innovation capital and process capital. Organisational capital includes all the existing computer systems, distribution and supply channels, and the corporate philosophy and culture of an organisation. This includes information systems, proprietary databases, organisational charts, process manuals, laboratories, market intelligence and intellectual property (i.e. brand names and patents). This capital is part of the intellectual capital that is owned by an organisation and its efficient and dedicated management is essential for the creation of shareholder value, sustainable competitive advantage, and prolonged first-mover advantage. The ultimate role of structural capital is to enable managers and employees to leverage their human capital to ensure the efficient pursuit of organisational goals.

The knowledge and experience generated in the process of organizational practice will be institutionalized and systematized and will not be taken away by employees upon their departure from an organization. In education system, the management can development and commercialize of new knowledge and processes, and organizational culture can drive an organization to formulate an innovation strategy that can help achieve its innovation goals and improve its innovation performance. The institutionalization of knowledge and systematic experience can promote an organization innovation because organizations mainly generate new products or services by applying their existing knowledge and experiences, combining their previous knowledge, and accumulating their experiences to solve existing problems.

Innovation refers to the process of discovering or creating new ideas. Innovation may refer to a new production process or improvements in the tools or methods for achieving innovation. Innovation capital comprises an organization's ability to create new products and services that represent additional value for customers. The non-human storehouse of knowledge in a firm that involves organizational structures, such as the organizational routine, the structure of the business and various types of intellectual property (Taghizadeh & Zeinalzadeh, 2012). The knowledge that has been used in daily task of organization is referred to as the structural capital. It deals with the structure and system that is available in the organization and society which knowledge will be the key resource rather than the quantity of economic and natural resources, and workforce.

Organizational capital is a value generated and an asset developed from customer relationships. Successfully managing these relationships is enhanced by knowledge management (KM) infrastructure that captures and transfers customer-related knowledge. The execution of such a system relies on the vision and determination of the school administrators. Therefore, developing organizational capital is critical for schools in meeting the needs of key stakeholders (students and parents) and to remain competitive in the global world. Organizational capital is the relationship built up with the customers.

Martin-de-Castro, Delgado-Verde, López-Sáez and Navas-López (2011) define process capital as workflow, operation processes, specific methods, business development plans, information technology systems, and cooperative culture, among others.

Teaching and learning is said to be tightly bound activities (Tazi & Zorik, 2008). Teaching is a specialized process which involves applying knowledge, skills and attitudes designed to provide unique service to meet the educational needs of an individual. Teaching facilitates learning. Learning is the

process concerned with the attainment of habits, knowledge and attitude in the educational system, learning involves new ways of doing things and it operates in an individual's attempt to adjust to new situations or overcome every modification on behaviour to meet environmental requirements. Teaching and learning are the base foundation of education, hence requires adequate non-human resources for the realization of goals and objectives emanated from it. From the forgoing, it is pertinent to state that structural capital play an undisputable role in ensuring and achieving effective teaching and learning. Hence, the need to efficiently manage structural capital comprehensively for effective teaching and learning cannot be overemphasized. It is based on this background that this study sought to examine the influence of structural capital management on teaching learning process in public junior secondary schools in Port Harcourt Metropolis, Rivers State.

Statement of the Problem

Structural capital management is an essential task that makes the teaching and learning process to be effective and efficient. This has been perceived as an effective means of solving knowledge hoarding and limited expertise problems in educational institutions. Typically, Structural capital management is aligned to the objectives of educational institutions in order to achieve expected outcome through integration with innovation to strengthen capabilities of the teachers and qualities of teaching and learning activities. The truth is that realizing effectiveness and significance gains requires continuous effort of the management in executing structural capital management in their teaching and learning activities. Such practices generate positive outcomes in producing various knowledge and new ideas to develop innovation in teaching and learning processes. It is therefore, the problem of the study to investigate influence of organizational capital management, innovation capital management, process capital management and the challenges in the management of structural capital in teaching learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria.

Purpose of the Study

The purpose of this study was to investigate the influence of structural capital management on teaching learning process in public junior secondary schools in Port Harcourt Metropolis, Rivers State, Nigeria. In view of this, the objectives of the study intended to:

1. examine the influence of organisational capital management on teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria.
2. Identify the challenges in the management of structural capital in teaching learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria.

Research Questions

The following research questions guided the study:

1. What is the influence of organisational capital management on teaching learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria?
2. What are the challenges in the management of structural capital in teaching learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance

- 1: There is no significant difference between the mean responses of male and female teachers on the influence of organisational capital management on teaching learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria.
- 2: There is no significant difference between the mean responses of male and female teachers on the challenges in the management of structural capital in teaching learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria.

RESEARCH METHODS

This section is concerned with explicating the methods and techniques that were used in actually conducting the study. It examines the methods with which the research data is to be collected, interpreted and analyzed as well as the materials used in achieving this. It covers such subheading as Design of the Study, Area of the Study, Population of the Study, Sample and Sampling Technique,

Validation of the Instrument, Reliability of the Instrument, Administration of the Instrument and Methods of Data Analysis.

The study employed the descriptive survey research design to ascertain the perceived influence of structural capital management on teaching learning process in public junior secondary schools. Two research questions and two null hypotheses guided the study. The study was carried out in Rivers State of Nigeria and the population consisted of 845 public junior secondary school teachers. A stratified random sampling techniques was used to draw 422 teachers as the sample size of the study. The instrument for data collection was structured questionnaire designed on a four (4) point rating scale of: Very High Extent (4-points), High Extent (3-points), Moderate Extent (2-points) and Low Extent (1-point) respectively. The questionnaire was validated by three experts and the internal consistency of the questionnaire item was 0.81. The questionnaire was administered with the help of trained research assistants. Mean and standard deviation were used to answer the research questions while z-test statistic was used to test the null hypotheses formulated at 0.05 level of significance.

RESULTS

Research Question 1: *What is the influence of organisational capital management on teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria?*

Table1: Mean Ratings and Standard Deviation of Male and Female Teachers on the Influence of Organisational Capital Management on Teaching Learning Process in Secondary Schools in Port Harcourt metropolis, Rivers State, Nigeria

S/N	Influence of organisational capital management on teaching and learning process	Male Teachers (<i>n</i> = 114)		Female Teachers (<i>n</i> = 308)		Rank Order	Remark
		\bar{x}	SD	\bar{x}	SD		
1.	Organizing seminars on teaching and learning process	2.58	1.15	2.58	1.08	5 th	Agree
2.	Encouraging mentor-mentee programmes	2.70	1.03	2.51	1.01	4 th	Agree
3.	Provision of the right physical infrastructure	3.11	0.94	3.09	0.75	1 st	Agree
4.	Encouraging knowledge sharing among teaching staff	3.04	0.88	2.96	0.84	2 nd	Agree
5.	Organizing conferences for teachers	2.88	0.95	2.79	0.82	3 rd	Agree
Aggregate Mean/Standard Deviation		2.86	0.99	2.79	0.90		Agree

Source: Field Survey (2021)

Data on Table 1 shows the mean ratings and standard deviation of male and female teachers on the influence of organisational capital management on teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria. The Table shows that both male and female teachers jointly agreed to items 11, 12, 13, 14 and 15 with the mean scores above the criterion mean of 2.50. Item 13 was ranked highest with mean score of 3.10 while item 11 was ranked lowest with mean score of 2.58. Male and female teachers had aggregate mean score of 2.86 and 2.79 respectively. The overall aggregate mean score of 2.82 indicated that the influence of organisational capital management on

teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria include; provision of the right physical infrastructure, encouraging knowledge sharing among teaching staff, organizing conferences for teachers, encouraging mentor-mentee programmes and organizing seminars on teaching and learning process.

Research Question 2

What are the challenges in the management of structural capital in teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria?

Table 2: Mean ratings and Standard Deviation of Male and Female Teachers on the Challenges in the Management of Structural Capital in Teaching Learning Process in Secondary schools in Port Harcourt metropolis, Rivers State, Nigeria

S/N	Challenges in the Management of structural capital in teaching and learning process	Male Teachers (n = 114)		Female Teachers (n = 308)		Rank Order	Remark
		\bar{x}	SD	\bar{x}	SD		
6.	Poor funding	2.84	1.10	2.99	0.94	3 rd	Agree
7.	Inadequate teaching aids	2.93	0.92	2.79	0.99	5 th	Agree
8.	Polluted learning environment	2.99	0.88	2.96	0.83	2 nd	Agree
9.	Lack of effective communication channels	3.04	0.88	3.01	0.83	1 st	Agree
10.	Inadequate infrastructure to facilitate structural capital management	3.09	1.03	2.75	0.86	3 rd	Agree
Aggregate Mean/Standard Deviation		2.98	0.96	2.90	0.89		Agree

Source: Field Survey (2021)

Data on Table 2 shows the mean ratings and standard deviation of male and female teachers on the challenges in the management of structural capital in teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria. The Table shows that both male and female teachers jointly agreed to items 16, 17, 18, 19 and 20 with the mean scores above the criterion mean of 2.50. Item 19 was ranked highest with mean score of 3.03 while item 17 was ranked lowest with mean score of 2.86. Male and female teachers had aggregate mean score of 2.98 and 2.90 respectively. The overall aggregate mean score of 2.94 indicated that the challenges in the management of structural capital in teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria include; lack of effective communication channels, polluted learning environment, inadequate infrastructure to facilitate structural capital management, poor funding and inadequate teaching aids.

Hypothesis 1

There is no significant difference between the mean ratings of male and female teachers on the influence of organisational capital management on teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria.

Table 3: z-test Analysis of Mean Ratings of Male and Female Teachers on the Influence of Organizational Capital Management on Teaching Learning Process in Secondary Schools in Port Harcourt Metropolis, Rivers State, Nigeria

Teachers	n	\bar{x}	S.D	df	z-cal.	z-crit.	Decision
Male	114	2.90	1.00				
Female	308	2.79	0.90	420	1.03	± 1.96	Not Rejected
Total	422						

Level of significance = 0.05

Data on Table 3 show summary of mean, standard deviation and z-test of difference between the mean ratings of male and female teachers on the influence of organizational capital management on teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria. The calculated z-value used in testing the hypothesis stood at 1.03 while the z-critical value stood at ± 1.96 using 420 degrees of freedom. At 0.05 level of significance and 420 degrees of freedom, the calculated z-test of 1.03 was less than z-critical value of ± 1.96 , hence there is no significant difference between the responses of male and female teachers on the influence of organizational capital management on teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State. Based on the foregoing, the researcher fail to reject the null hypothesis, and confirmed that there is no significant difference between the mean ratings of male and female teachers on the influence of organisational capital management on teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State.

Hypothesis 2

There is no significant difference on the mean ratings of male and female teachers on the challenges in the management of structural capital in teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria.

Table 4: z-test Analysis of the Mean Ratings Mean Ratings of Male and Female Teachers on the Challenges in the Management of Structural Capital in Teaching and Learning Process in Secondary Schools in Port Harcourt Metropolis, Rivers State, Nigeria

Teachers	N	\bar{x}	S.D	Df	z-cal.	z-crit.	Decision
Male	114	2.98	0.96				
Female	308	2.90	0.89	420	1.02	± 1.96	Not Rejected
Total	422						

Level of significance = 0.05

Data on Table 4 show summary of mean, standard deviation and z-test of difference between the mean ratings of male and female teachers on challenges in the management of structural capital in teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State, Nigeria. The calculated z-value, used in testing the hypothesis stood at 1.02, while the z-critical value stood at ± 1.96 using 420 degrees of freedom. At 0.05 level of significance and 420 degrees of freedom, the calculated z-test value of 1.02 was less than z-critical value of ± 1.96 , hence there is no significant difference between the

responses of the male and female teachers on the challenges in the management of structural capital in teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State. Based on the foregoing, the researcher accepted the null hypothesis and conformed that there is no significant difference between the mean ratings of male and female teachers on the challenges in the management of structural capital in teaching and learning process in secondary schools in Port Harcourt metropolis, Rivers State.

CONCLUSION

Based on the findings, it was therefore concluded that structural capital management have some positive influence on the teaching and learning process in public junior secondary schools in Port Harcourt metropolis in Rivers State. Some of these were that, principals make appeal rather than command their staff, structural capital management shapes students character and still good behavior in them, it enables human capital to function effectively as well as enables teachers to practice professional leadership.

RECOMMENDATIONS

1. There should be improvement of function of the education sector by the government.
2. Adequate classroom blocks should be made available to reduce stress of over-crowding in a limited space during teaching and learning.
3. Library facilities should be provided to encourage students learning capacities as well as enhancing independent learning processes.
4. More recognition should be placed on competence and skill acquisition especially for employment recruitment of teachers.

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