Full Length Research

Scientific Management and the frontiers of Librarianship in dynamic circumstances

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The paper focused on Taylorism, a concept signifying the adoption/adaption of scientific management principles propounded by Frederick Winslow Taylor. The paper leveraged on the principles to espouse the philosophy of scientific management and its relevance in today's library management which it arguably showed to dominate the library management space for several decades. It asked in the course of the discourse if there is need for modification or outright change of the mechanistic management considering deficient such principles has on futuristic library operations. The position of the authors is that, it has become necessary to modify/change the curriculum of library schools to accommodate modernity and the flexibility of other management principle to pilot the affairs of the library practices effectively and efficiently. In conclusion, we averred that the inclusion of neo-classical and modern management principles into teaching of library administration should be enforced at the strategic levels of librarianship.

Keywords: Taylorism, librarianship, management, scientific management.

INTRODUCTION

The studies of management theories, their principles and applications have befitted managers to overcome problems of management deficiencies. It is not strange to librarianship, however seen as area scholars have not adequately exploited to attain the best management principle for libraries. There are several suppositions, some do not see librarianship as lacking implementable management because it already has a robust management routine but times have changed several of these routines that has made each of the earlier routine to be to some extent inconsistent with the paradigm shift. These managerial perceptions are conceived within the classical management theories and their principles. This could be part of the problems thwarting effective and efficient service delivery, unreceptiveness and poor articulation of internal and external environments by heads of libraries. This could constitute the poor changes observed with librarianship and perhaps be reported as one of the reasons the institution and the professionals are struggling for survival even though it is a unique discipline. Librarian roles comprise going beyond the care of information resources and services to education and facilitating access and utilization of information resources that can accomplished and bridge the gaps in the course of other professionals achieving their information needs.

Those who qualify from library schools globally to practice could call themselves information brokers, research specialists, knowledge managers, librarians,

archivist, independent information professionals, curators, and so on. The general umbrella globally accepted for these group of professionals is librarianship. Librarianship has multiple concepts because the specialists are defined in diverse ways, which include by the types of duties they perform. These defined boundaries provide also an understanding of the diversified positions and places where these professionals can be employed. However, the academia among these professionals deals with schools, teaching and research activities. For those practicing are called professionals and they are saddled with maintaining and sustaining services in public, school, academic, private, and research libraries. In terms of areas of specialization, librarianship support in areas of knowledge management, information technology, government information policy, archivist, curators, and social researchers. The major concern is to facilitate putting information to use, organize information and corporate settings that can support and enhance information handlers.

Librarianship accommodates numerous other academic fields who seek advance degrees because of its relevance in education, current affairs and development. As a general course in tertiary institutions, it pave ways for postgraduate students in the areas of law, management, health, sciences and public administration who are welcomed to take higher degrees in librarianship. Therefore, aligning multi-cultural background of candidates to a universal norm such as the use of theoretical underpinnings to buttress managerial approaches enjoyed by librarians is key. The thrust could be to emphasize that management is dynamic and so too must be librarianship. However, it is traditional to note why certain management principle dominated the space to attain the traditional objectives and goals. The scheme to support a metamorphosed librarianship is contained in the drive for its sustainability.

To sustain librarianship, management practices and principles should be periodically appraised first for its strength and weaknesses, second for the outcome of its adaption/adoption, and third, to ascertain the ways such management thrust have influence the effectiveness and efficiency of the entire product of the system. A prominent product of librarianship is a librarian who functions in a library, the others are academics and those who function in the public and private settings. The librarian in a library for instance, engages the largest number of library school product. Libraries are described differently; as a flexible learning space (Hillman, Blackburn, Shamp & Munez, 2018), a dynamic space adaptable for changing needs to support learning (Fallin, 2016), a place for informal learning (Montgomery, 2014) which shows that librarianship encourages academic work and socialization (Hillman *et al.*, 2018). These different descriptors signified that managerial principles used in this sphere play a significant role and necessary to be underscored.

It could be apt to say that like other fields that promote

studies of managerial challenges because of the consciousness that there are evolving and many changing roles of curriculum and practice, encroachment due to the influence of technologies, dynamics of workers and opened competition. The age long managerial philosophy which draws its strength overwhelmingly from Taylorism has its advantages and disadvantages which cannot be disputed, which is an indication that, librarianship who opted for the library are also challenged managerially. The perspectives of concerned studies on addressing the managerial challenges facing libraries seek answer the question "what has been put in place to make managers of libraries conform with library frontiers and also contemporary library managerial principle?"

The concept of frontiers has its roots to two cultural differences and what transpired between them. The later could be interpreted as moving furthest to freedom, expansion and development (Mukherjee, 1966).Therefore, librarianship frontiers are the unlimited opportunities and threats confronting it. The frontier also speaks of the possible measures that deemed necessary to overcome the threats and explore the opportunities for the advancement of librarianship. Starting with the negatives, what are then the surrounding threats to librarianship? Because the focus of the paper is on Taylorism - a formalized management activity (Waddell, Jones & George, 2013), it suffice to look at the threats which unfortunately emerged amidst crave for best practices in the technical sections of the library. Other negative frontiers of librarianship are competitors such as World Wide Web which drives the internet and make shreds the characteristics of information. We must admit, however that the World Wide Web - a pathogen has exposed the weakness of librarianship and its managerial consciousness (Matthews, 2011). For the opportunities of Taylorism to librarianship, it advantages have improved access and retrieval as well as storage of diverse information resources.

We are optimistic that the popularity of Taylorism at different times of librarianship history was the ease with which it is adoptable. According to Kipp (1970) Taylorism came to librarianship at the period when libraries were faced with difficulty, non-uniformity and translational results which the relied survey of American Library Association (ALA) for library procedure could not provide between 1911 and 1913 (because the Committee on Library Administration of the American Library Association was unable to provide management principle). This shows why Taylorism has eaten deep into librarianship - a ready-made, well-developed and complete set of specifications which the libraries sheepishly adapt.

With the development of other managerial principles (bureaucratic, social and recently modern) which exposed the deficiencies of Taylorism, particularly its ills such as; disfranchises creativity and upholds monopolistic operations that existed in the 20th and

21st centuries which empower the librarians (managers) continue to remain boss and think, while the workers only do and can only ask questions that meant to elicit what the bosses want cannot continue. There is no goal set or defined because workers do exactly as they were told to do no more. A semblance of mixture of managerial principles seem to emerge recently, but it is doubtful if with the present environmental, education, patrons and societal dynamics will permit the library continue its managerial transformation in a slow pace. We worry for the library survival because we find Taylorism very rigid in the planning processes, organization and directions of library personnel and external environments.

The paper is discussed according to five themes: the first is introduction; the second theme is on philosophy of the Scientific Management Theory by Frederick Winslow Taylor and what constitute Taylorism; third is the main ideas of scientific management theory, the fourth is on what could be done about Taylorism and its application in librarianship, and the fifth theme is the conclusion.

Philosophy of Scientific Management Theory and What Constitutes Taylorism

Taylorism philosophy encouraged hard-work and optimizing the ways work is done in a monopolistic manner (Uddin & Hossain, 2015). Conceptually, Taylorism refers to adoption of the four principles of scientific management propounded by Frederick Winslow Taylor to execute tasks/responsibilities by an organization. These principles comprise:

(1) Replacing working by "rule of thumb" or simple habit and common sense, with scientific method to study work and determine the most efficient way to perform specific tasks.
(2) Rather than simply assign workers to just any job, match workers to their jobs based on capability and motivation, and train them to work at maximum efficiency.
(3) Monitor worker performance, and provide instruction and supervision to ensure that they are using the most efficient ways of working.
(4) Allocate the work between managers and workers so that the managers spend their time planning, training and allowing the workers to perform their tasks efficiently.

Taylorism permeates virtually all management thinking, contributing in terms of performance management and surveillance, it emphasized on incentives, job analysis, departmentalization, functional management forms, management by objectives, goal setting, staffing, training, testing, reducing variation and waste in any process, but the system cannot be adopted in totality today.

Its relevance includes dedication by dictation to work.

This could be relevant once upon a time and a good reasons for its adaption/adoption. Many libraries did so to buttress that the library as a system need to improvise ways to affect the economy of labour (Rowley & Jackson, 2011). A cursory look at Taylorism principles particularly its contributions are given below:

Replacing rule of thumb with scientific method to determine the most efficient way to perform specific tasks:

In librarianship, organization and selection are unique activities which require a well-articulated procedure assigned to personnel, such personnel after attaining training are expected to exhibit proficiency and efficiency as it was done successfully over the years. With proliferation of information media and dare need for collaboration, it could become challenging for a single personnel to run checks that authenticate and validate all scholarships subscribed to the library for its stakeholders. However, that the library maintains highly technical and guided units, it must be able to show and accommodate innovation; itemize what it deems as best practices, and recommend the universal need for the visibility of stock, descriptors and services outcomes which Taylorism seldom encourage because of its individualistic tendency.

To a large extent, the library has not failed to upheld scientific methods with its standardized and documentation processes which have aided performed routines systematically and sustaining approaches that are executable, open for replications and modification as well. However, factors that can be categorized as externally motivated such as cultural, demographic and environmental diversities are lacking because they cannot be included in Taylorism. These factors must concern managers. This is particularly deficient on numerous grounds of the Taylorism principles. The principles affect the subjective and objective norms of librarianship which must be set beyond mediocrity. The reconsideration thrust of such Taylorism scientific approach is to make it open and accommodating to be able to engage in IF-THEN scenario that is grossly deficient of the first principle of Taylorism which does not promote engagement of stakeholders.

Match workers based on capability and motivation and train them to work at maximum efficiency:

Management success no longer depends on matching workers based on capability and motivation, nor hoping that training would produce desired result. Globalization, work-force diversity, changing skills requirement, decentralized work sites and technology are some factors that constitute work mobility. Employability of staff is no longer depending on physical presence, but intelligence, attaining set targets and team work which get the job

done. These are the priorities that indeed changed the second principle of Taylorism. It also change the earlier situation when managers are burden with classification, tabulation, setting rules, laws and formula for workers performance with those of managing knowledge that is with the people in terms of their experiences, qualifications, reputations and the opportunities they can attract to the organisation. The mechanistic age of Taylor particularly driven by quantity lacked what is required of libraries today where total holding does not matter, what matters are access, time saving, educational support and facilitation. Where such is attained the library is categorized as effective and efficient. The library is multi-functional, so much so that employees are not expected to be totally liability to the library.

The scientific selection, training, teaching and development of workers following a top-down advocated by Taylorismis obsolete, it is irrelevant in this dispensation of librarianship because of the consciousness that workers know their worth and patrons highly dynamic. Therefore, librarianship should update in terms of task and idea beyond individualism to that of incorporating cooperation, attraction and retaining competent personnel. Work harmony is no longer the domain of the manager which the neo-classical and modern management principles promote for the contemplation of any organisation.

The admonishment of Taylorism at this point is not to condemn or point to how the library has spent several decades as its operating management principle but to suggest that it must modernize these principles to accommodate the trending circumstance that is threatening to retard librarianship.

Monitor workers performance provide instructions to ensure that they are using the most efficient way of working:

The third principle is one of the attributes of Taylorism that instigated the submissions that it is dehumanizing. By the principle to insist that human must be treated as machines by monitoring to ensure that what is to be done must be without recourse to any excuse such as time and emotion. However, Taylor has been able to argue that such work should not be injurious to the health of worker and that on the long run workers are happier and more prosperous. How this can be sustained remained academic (Caldari, 2007).

Why managers could monitor workers performance, provide instructions and ensure that they are using the most efficient way of working could be attributed to employing personnel that lack education, skills and are desperate to submit themselves for exploitation. Taylor explanation attested to this supposition because he confirmed that selections of workers were carefully followed and those chosen happens after looking up their history, habits and ambition. The confession of one of

such worker was also quiet alarming, the description of the character, that "a penny looks about the size of a chart-wheel to him" (referred to as Schmidt) –which means he could do whatever it takes to earn a living. Monitoring workers in the current dispensation has limitations particularly that most management principles support personnel participation in decision making, cooperation among personnel, promote knowledge sharing and accommodate change which Taylorism did not prioritized.

Managers should spend their time to plan, training, and allowing the workers to perform their tasks efficient:

In Taylorism, the manager is reserved with the rights to plan, organize, direct, lead and control available sub-ordinate at their disposal to achieve goals through their optimal use (Nelson, 1992; Uddin & Hossain, 2015). The onus has not changed but the approach today is that which accommodates diversities. Managers find the right management approach in accordance with the changing nature of business, technology, knowledge and even organizational culture to guide and contribute to the successful execution of tasks. That could be reasons managers who are determined to achieve set goals no longer work in isolation, they don't lord over the workforce, there are neither single prescribed tools nor methods straight jacket rules utilize to wrestle them down as was in the days of Taylor. Nevertheless, what is exploited by managers include making the work place competitive which they do by harnessing employee knowledge-base, education, skills and expertise (Parker, 2002; Ratnayake & Ima, 2009; Uddin & Hossain, 2015; Waddell, Jones & George, 2013). These authors were critical of the messages of numerous management theories and their principles to predict approaches, behaviour and controlling consequences which Taylorism excluded.

Therefore, the vesting of powers on managers at this point in time could be inimical to the progress and success of the library, as manager are implored possess attributes of a cooperating team mate and identify those with excellence and work with them. But Taylorism, failed to evolve its philosophy.

The Main Ideas of Scientific Management Theory that probably attracted librarianship

*Norm of Work***:** The key issue around scientific management theory is improving labor productivity particularly at that time when experience management was most prevalent and there was gross lack of management method that could predict accurately worker's labor efficiency as it was able to do.

Difference Piecework System: Taylorism facilitates the study daily wages through detailed analysis as is today a management concern.

Specialization of Management Functions: Taylor revealed that in practice, it is impossible to make the workers plan and execute the work simultaneously, and was able to address the contradiction using the average distribution of responsibilities between management and workers, was able to separate the functions of plan and executive functions and set up special planning level.

Principle of Management Exception: *Taylor* believed that setting exception principle which confined on the senior management personnel in an organization to daily authorize transaction to subordinate could be staggered so that the manager can have time to think about and study his important personnel's character and suitability.

What Could Be Done About Taylorism and Its Application in Librarianship

The application of scientific management principles to librarianship has been scattered, uncoordinated and in many instances has represented an unconscious acceptance of management principles (Kipp, 1970). Literatures recommending the application of management theory to research libraries are well documented (Coney, 1930; 1952), the functions of management in library must be consistently and continuously adapt to new management practices.

The publishing of "the principles of scientific management" by Taylor proposed the optimization and simplifying of jobs, increase productivity, workers and managers cooperation with one another is still very attractive but at a cost to other suitable measures. One could wonder why managers of librarianship prefer Taylorism. Could it be that some library managers profit, and not mindful of what they feel or could do to improve? The ways they clung to the old standardization of operation and think that worker's main motivation apart from incentives could be continue retention of employment has proven otherwise. Taylorism believed that all workers were motivated by money, so he promoted the idea of 'a fair day's pay for a fair day's work – a number who have not achieved enough in a day, don't deserve to be paid as much as another who is highly productive.

Taylor concluded that certain people could work more efficiently than others, these were openings for managers to seek to have other management principles that could make attaining goals and objectives of librarianship possible. However, as long as librarianship is determined to improve, genuine changes could come with re-evaluation of Taylorism, sustaining relevant parts and modifying others that are obsolete. Academics and

librarians must however work towards it, and then the desired goals could be attained.

Librarianship is in dare need to remain competitive, be recognized, relevant and firm. To achieve this too library schools must be part of the change particularly as they dedicated training not entirely focusing on the individuals, possession of high professionals skills and the deep interest of faculty members in transferring their knowledge to students only to making them managers that are conscious of the role of management, principles of engagements and leading.

The current processes of the schools still follow the bottom-up approach which Taylor neglected can be utilized in areas where Taylorism remain very relevant for the harnessing of knowledge, communication, suggestions and mentorship. The up-down approach that is largely hierarchical may be discarded where is it solitude and cause workers ignorance, choosing to remain untrained, uneducated and stagnant. Taylorism worked effectively earlier in the libraries because the services are conventional (needs physical presence, search through selves, books, periodicals, micro-Fitch, etc) and predictable, and workers then lord over. This may not work with the evolution brought by technology, need for collaboration among professionals and competitors to remain relevant on the global information space. Taylorism may now be affecting service efficiency particularly when patrons are technology savvy and librarians are not. Librarianship as office and position is expected to align with services that are competitive and intelligently attractive. Accordingly, Mullins (2011) enumerated the thrust for contemporary management theories to encourage informal relationships, communication, uniqueness of individuals, and motivation rather than monetary incentives.

In Nigeria, according to Adegboye (2015) the evolution of management theories is suffering from "a deluge that may be more confusing in practices than directional and lacks of universal validity". He proposed the applicability of management philosophies that has sanity to the body of knowledge to tackle the differences of domestication in Nigeria context.

It is not sufficient to just proclaim that discontinuing Taylorism starts and end by consulting stakeholders to determine an appropriate set of goals nor standardizing a quantitative performance objective (metrics) without first comprehending the implications of each principle of Taylorism and its implications as many protagonist acclaim saying also that the managerial principles is responsive. This implies that whatever management goals that emerges could be such that the goals developed are not limited to generalized platitudes but specific, measurable and possess operational objectives which every stakeholder is self-seen as playing a vital role aimed at dictating possible solutions in such an IF-THEN scenarios where options profiled are adopted after thoughtful scrutiny and following a bottom-up approach.

Egberongbe, Sen and Willett (2015) proposed quality management approach. Thomas (2011) concerns were addressing the influence of homogeneity of activities, whereas, Gale *et al* (2013) recommended correcting the fail alignment to a particular epistemological, philosophical or theoretical approach. It is true that Taylorism could constitute a management principle that kept librarianship alive; it appears that the unresponsive, change-resisting attitude exhibited may also be caused neglect of succeeding generations to reviewing the implications on current practices and philosophy of management and dispositions of stakeholders. For instance, the Nigerian scenario show that management in librarianship is influenced by effective alignment with parental (host) goals, emphasis on human capital, holistic view of the library, building leadership in the profession, leadership training for staff and managing library environment (Egberongbe, Sen & Willett, 2015). Worthy of note is that librarianship as a position and office has three basic elements which must function together accordingly, these three basic elements comprised: (1) the library as an organ, (2) has linking process, and (3) decision making and analysis components. Each of these basic elements have sub-elements encompassing them making them formidable and importance; the library as an organ, the first element functions because it sub-element include (a) workers (individuals), (b) the formal and informal rules governing, (c) unique behavioural patterns demanded by the organization and (d) requirement to comprehend assigned roles by the organization. Sub-elements that facilitate the linking process comprise (i) communication, (ii) balance and (iii) decision making. These sub-elements specifically influence operations, organization and interaction between all the basic elements. For the decision making and analysis components are (i) directional-decision to participate and (ii) decision reached to produce. When fully and dully integrated is all inclusive of the basic elements and their sub-elements.

According to Bartlett and Ghoshal (1994, 1995), changing role of top management influence Taylorism, they argued that purpose not strategy is the reason an organization exists, therefore criticized Taylor's stand point which reversed this trend. As a follow up in their second article (1995), they recommended that organization should move beyond strategy, structure and systems to a framework built on purpose, processes and people as the traditional Taylorian strategy-structure-systems construct set intentionally to minimize the idiosyncrasies of human behaviour is no longer tenable. Finally, they reported that (i) organization must lay less emphasis on following clear strategic plans and more importance to defining engaging purposes; (ii) less focus on formed structures, and more attention to effective processes, and (iii) less concern for control through systems, and more appreciation of capabilities and perspectives.

What drives the organizations today is knowledge. This as a process can be linked with Taylorism to maximize productivity when the human relation components are included. Adapting/adopting Taylorism in its traditional form may no longer be relevant today because of its monotonous tendencies and boredom it can increase in other parts of the library. It could be however unruly not to acknowledge the role of Taylorism contributions in areas such as operation management, business process management, continuous process improvement and streamlining.

Librarianship as a field of study, office, position and professional practice requires numerous managerial techniques that can assure effectiveness and efficiency, creativity and participation in the different processes, resolve any form of truncation or cohesion that cause excessive pressure from external factors. The courses taught in the numerous library schools also follow a rigid pattern of top-down approach, not flexible and non-conformist to contemporary realities to some extent. Costing the job performed was also a reason advanced for the adoption of Taylorism which also aimed at determining standards of performance, the work of each department, accomplishment, placement of responsibilities, hiring and assigning employees. It was also concerted to distinguish planning from execution of policy, codification of personnel policies and their rapid growth. Since then librarianship formed a pattern consonant with the theory of scientific management (Uddin & Hossain, 2015). Therefore, making management of the library office and position more of a role rather than operated as a process which engages everyone.

Seeking economics of scale may not be applicable in all the units of the library even though the library routines seemed to encourage so and also Taylorism. Earlier warning of failing to operate suitable management procedures for libraries were dismissed. These suggestions borders on adopting management practices that have a business-like attitude. The suggestion argued that librarianship it is one of the greatest factors in modern civilization and therefore should not be treated with levity (Soule, 1892).

Innovations in librarianship are externally motivated (Gerolinos, 2008) which requires some level of retrospection of the evolutionary implications of the library schools and their products and how they were able to loose off from the tightly control, narrowly defined jobs and the top down managerial attitudes taught them in library schools, to such that encourage contributions of subordinates and stakeholders they serve (Gibson, 1992).

Processes that need rapt attention in the library as office and position include interrelationship of the physical library environment, leadership style and the worker. These are the realities that generalization of physical library environment cannot deal with when it is proposing

effectiveness. Every library environment is dynamic; leaders (managers) of libraries are sometimes very poor at articulating so. Instilling such knowledge will mean doing away from library schools all that has to do with dogma that is restricting curriculum from being restructured to demands. For instance, it is not yet clear why librarians in their position and offices remain traditional, obsessive, paradigmatic and rigid so much so that they don't separate thinking from doing.

Attributes such as resistance to change, discomfort, gloominess and clumsiness of interpersonal, institutional and professional relationships must be addressed using contemporary management principles. These can suggest that librarianship can compete when is able to adapt to multi-tasking and teamwork inclining theories of management to explore and exploit today's knowledge based era, gain better understanding of what constitute motivation, conflict, expectations and group dynamics; others gains include appealing, flexibility and attractive in line with prevailing situation, continuous improvement and prescribe the flattering of management pyramid, building consensus at all levels and reducing levels of hierarchy to increase motivation, creativity and work performance (Olum, 2004; Adegboye, 2013).

Osunde*et al.*(2015) reiterated that receptiveness to changing environment deepens workplace problems. As one of the disadvantages of Taylorism, shortcomings such as suffering of lack of open, sinuous communication or using the off beam organizational structure must be discouraged. The holding tight to leadership style according to Fatokun et al (2010) could be blamed on the complexities of librarianship now needing ways to explore its own set objectives, hierarchical structure, official decision making processes, institutional policy and routines. They suggested for a less rigid hierarchical structure to result in much more effective organizational performance.

CONCLUSION

It could be concluded that Taylorism over the years paved the ways for the library to operate a formidable management principle, but the library like others who benefit from the management principles and indeed modified with other contemporary principles have results that is urging the library to follow suit. There are numerous reasons that the library reconsideration of mechanistic principles should aroused it to adopt/adapt management neo-classical and modern principles, particularly for the need for cooperation between workers and managers and need for teamwork. The application of these newer management principles should not change the significant contribution recorded in areas such as; the systematic selection, training procedures and the ways to study workplace efficiency and corresponding systematic designs of mechanistic management principles.

The library resolve for contemporary management principles should be to address contending issues on roles specifics and monopolistic disjoint that the scientific principles have promoted now found unpopular, and making the library less competitive in a very fierce, virtual and seamless technological environment where the managerial principles help to shape and support. We have seen that the removed of walls and physical presence which were present during Taylor is no longer obtainable with the inception of the 21st century. Therefore, the intensity to which contemporary management principles becomes a necessity to deemphasize Taylorism - Top-bottom approach to the most favorable Bottom-up approach would require the attraction of some neo-classical and modern management principles on one hand, and on the other retaining some of the scientific principles to reduce exit of organizational knowledge-based and the predatory tendencies of skill poachers.

REFERENCES

Bartlett, C.A. & Ghoshal, S. (1994). Changing the role of top management beyond strategy to purpose. Harvard Business Review, 79 – 88.

Bartlett, C.A. & Ghoshal, S. (Eds.) (1995). Transnational management: Text, cases and reading in cross-border management, London, Irwin.

Caldari, K. (2007), Alfred Marshall's critical analysis of scientific management. *The European Journal of the History of Economic Thought*,14 (1), 55-78, Taylor & Francis Group, Routhledge.

Coney, D. (1930). Scientific management and university libraries. *In:* Schwenning, G. T. (Ed.): *Management Problems.* (University of North Carolina Social Study Series) Chapel Hill, University of North Carolina Press, pp. 168-198.

Coney, D.(1952). Management in college and university libraries. *Library Trends,* 1:83-94.

Egberongbe, H., Sen, B. & Willett, P. (2015). Quality management approach in academic libraries: A pilot study of a Nigerian university library. *Qualitative and Quantitative Methods in Libraries (QQML)*, 4, 399 – 412.

Fallin, L. (2016). Beyond books: The concept of the academic library as learning space. *New Library World, 117,* 308-320. http://dx.doi.org/10.1108/NLW-10-2015-0079

Fatokun, J.O., Salaam, O.M. & Ajegbomogun, O.F. (2010). The influence of leadership style on the performance of subordinates in Nigerian libraries. *Library Philosophy and Practice* (September).

Gale, N.K., Heath, G., Cameron, E., Rashid, S. &Redwood, S.(2013).Using the framework method for analysis of Qualitative Data in Multi-Disciplinary Health Research. *BMC Medical Research Methodology*,

13(117), 1-8.

Gerolimos, M. (2008). Librarians' skills and qualifications in a modern informational environment, *Library Management*, 1-13.

Gibson, E. J. (1992). Taylorism and professional education. In: *Manufacturing systems*. Foundation of World-class practice.

Howard, P. (1940). The Functions of library management. *Library Quarterly,*10:313-349.

Ifechukwu, J. (2010). *African Approach to Management: Notes Towards a Theory*. Lagos.

Kipp, L. J. (1970). Scientific management in research libraries, *Library Trends*, 390 – 400.

Kipp, L. J., and Thomas, Annie T. (1951 Winter). The Creation of a Cataloguing Economy. *Harvard Library Bulletin,*5:112-116.

Matthews, S. (2011). Five challenges every librarian must face. Accessed on line @ 21stcenturylibrary.com/2011/10/12/five-challenges-every-librarian-must-face/ on 20/06/2018.

Mayo, E. (1945).*The Social Problems of an Industrial Civilization.* Boston, Division of Research, Graduate School of Business Administration, Harvard University, 1945, p. xiii.

Montgomery, S. E. (2014). Library space assessment: User learning behaviors in the library. *The Journal of Academic Librarianship,* 40, 70-75. http://dx.doi.org/10.1016/j.acalib.2013.11.003

Mukherjee, A. K. (1966). Librarianship: Its Philosophy and History. Asia Publishing House

Mullins (2011). Essentials of Organisational Behaviour. 3rd Edition. Pearson. Prentice Hall. Financial Times.

Nelson, D. (1992). Scientific management in retrospect. *AMental revolution: scientific management since Taylor*, Ohio State University Press, Columbus.

Olum, Y. (2004) Modern management theories and practices. Uganda: Makerere University.

Osunde, C., Joshi, A., Vyas, A. & Gargh, S. (2015). Management problems and practices: India and Nigeria. *Advances in Management*, 8(1),

Parker, M. (2002). *Managerialism and its discontents*, 1st Edition, Against management. Blackwell, Cambridge, pp. 1-16

Ratnayake, C. &Ima, .(2009). Evolution of scientific management towards performance measurement and managing systems for sustainable performance in industrial assets: Philosophical point of view, *Journal of Technology Management & Innovation*, 4(1), 152-161.

Rowley, C. & Jackson, K. (Eds.) (2011). Human resource management: The key concepts. Routledge, London, 321p.

Shaw, R. R. (1947). Scientific management in the library. *Wilson Library Bulletin,*21:349- 352.

Soule, C. C. (1892). The Boston public library. *Library Journal,* 17:54-55, 88-94, 124-125, Feb., March, April.

Thomas, G., (2011). *How To Do your Case Study: A Guide For Students And Researchers.* Los Angeles, Sage

Uddin, N. & Hossain, F. (2015). Evolution of modern management through Taylorism: An adjustment of scientific management comprising behavioural science. *Procedia Computer Science* 62, 578-584.

Waddell, D., Jones, G.R. & George, J. (2013). *Contemporary management*, 3rd Edition, McGraw-Hill Education, NSW, 37 – 55.