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Teaching and learning of classification module: experiences at University of Limpopo (UL)

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Abstract:

Classification involves correct subject placement of a document or an information source with a view of availing it to the users, and easy access to these documents/information sources at a specific location among other collections. Teaching and learning of Classification at the University of Limpopo (UL) is confronted by a number of challenges. Amongst the challenges are poor performance, low student output, majority of students obtain minimum pass mark, and sometimes pass especially after being given second chance through supplementary examinations. Negative perceptions and prejudices amongst students also affect the success of teaching and learning of the Classification module. The success of teaching and learning of the Classification module is largely dependent on various factors such as teaching and learning materials and commitment from both students and lecturers. This paper seeks to identify and suggest solutions to the low level of interest towards the module. Mixed methods research was employed in this study. A questionnaire was used to collect data from students who registered for the Classification module while semi-structured interviews were used to collect data from the lecturers and librarians are involved in cataloguing and teaching of Classification module. With the identified challenges and recommended solutions, it is hoped that students will be able to develop interest in Classification and help to increase the number of information professional to fill Classification posts as required in the job market.

Keywords: classification, subject analysis, information retrieval

1 INTRODUCTION

Classification is the correct placement of a document with a view to availing it to patrons, easy access to it at a specific location among the library collections (Esse, 2013). In simple terms, classification is concerned with the processing and categorisation of information sources in order to make them accessible to the users of the library. These sources usually consist of books, audio, audio visual materials, graphic materials and digital materials. According to Aina (2004) "if there were no prior organisation of objects, it would be difficult to retrieve a particular object from among the various objects in the collection when needed". Thus, classification is one of the backbones of the library. In Library and Information Science (LIS) education, Classification remains one of the core modules and has always held a central position in the curricula of LIS schools offering bibliographic control modules (Cabonero & Dolendo, 2013).

Classification is also an important process/practice that assist with the analysis of subjects content of the sources for the users. Through classification users are able to identify sources in terms of the subject they cover. This suggests that students must be well trained in order to acquire the subject analysis skill associated with Classification. Universities in different countries experience diverse challenges in teaching these modules. For example, In Nigeria, challenges in teaching and learning classification module are due to poor learning conditions and training infrastructure (Bello & Mansor, 2011). In South Africa, the challenge regarding teaching and learning of Classification include lack of teaching tools, students' lack of practical experience and their negative attitude towards the module (Ocholla & Ocholla, 2011).

The University of Limpopo offers the Classification module as a compulsory module for attaining an Information Science degree. The challenges experienced in the teaching and learning of this module seem to be increasing. Post review of students' performance in Classification tests and final assessment has led to a question on what factors causes students not to do well in the module while efforts such as extra tutorials, peer discussions, and practical are used as some of the teaching and learning strategies. The researcher's observation is that LIS students at the University of Limpopo relatively perform badly in Classification when compared with other modules. The Classification module is taught as more practical than theoretical and therefore requires a different approach and learning strategies. This approach on its own presents challenges of poor background understanding of the course. Hence, this paper focuses on teaching and learning of classification module and consequently suggests ways in which the teaching and learning of this module can be improved.

Additionally, an explanation will be given on the integration of practicals through the library as one of strategies employed to improve teaching and learning of the Classification module. The discussion also focuses on the successes and failures on the improved teaching and learning of classification to ensure both quality graduates and to improve the students' output rates. This paper can be used to establish guidelines on how teaching strategies can be used to enhance learning. It is hoped that assessing and analysing students' learning approaches will provide the schools of Information Science and opportunity to improve and enhance teaching and learning of Classification module.

2 RESEARCH OBJECTIVES

- To identify the teaching methods preferred in the classification module.
- To determine the extent to which students understand classification theory.
- To establish the learning styles students use to study the classification module.

- To investigate the attitudes of students towards the classification module.
- To indicate the level of performance among students of classification module.

3 THEORETICAL CONSIDERATIONS

It is evident that studies relating to Classification have already been conducted from various approaches. This paper introduced the aspect of diversities introduced by context. This is done by specifically concentrating on the teaching and learning and perceptions of the students towards Classification module within the context of the University of Limpopo. In this regard, literature on teaching methods and learning styles were reviewed. Research into the factors affecting the knowledge and competence levels of the students will be identified.

This paper is underpinned by theories of teaching and learning. According to Eryaman and Genc (2010: 535), a learning theory is a set of organised ideas and explanations of how people gain knowledge, develop skills, and build capacities. Thus, learning theories mainly focus on the process of learning, the conducive environment for effective learning and how to effectively impart knowledge. They describe the effective assessments, teaching methods and learning styles. The relevance of these theories lies in the fact that it is important for lecturers to understand learning theories and learning and teaching approaches to create effective learning environments and teaching activities. Similarly, it is important for students to be aware of the teaching approaches that are relevant for learning a particular module. As much as there are a number of learning theories, this paper adopts the behavioural theory of learning which postulates that learning can only be studied by observing situations in the surroundings. This theory stipulates that learning can be achieved if and when information to be learned is presented in small steps; students are given rapid feedback concerning the accuracy of their learning; and students are able to learn at their own pace (Ponticell, 2006: 605; Mhrka, 2014: 26)). This theory relates to the Classification module at University as Limpopo as this paper seeks to establish whether teaching and learning methods at UL permit students to learn in smaller steps, at their own pace while at the same time are provided with feedback to equip them with the necessary Classification knowledge and skills.

In classrooms, lecturers needs to have clear objectives, and should inform the students not only about how they can meet these objectives but also the rewards they will receive when they succeed (Mkonto 2010: 47). The Behaviourist theory focuses on observable things and do not consider the students' attitudes and commitment to module objectives. To consider the environment in which learning takes place and mental activities of the students (Mkonto 2010: 48), this paper also considered the cognitive learning theory.

The cognitive learning theory view students as active processors of new information who organises, stores and establish the relationship between the existing and new information (Mhrka, 2014:29). Mhrka indicates that the cognitivists emphasise the acquisition of knowledge and how people receive information from external environments, and analyse and arrange the information in the memory or mental structures for future use. The fact that students have to learn subject analysis and Classification theory and principles, make cognitive learning theory the most relevant theory to anchor this study on.

Classification is taught at third level, with one year left before the students joining the job market. Students have to apply their knowledge and relate it to actual life situations. This may have impact on their knowledge application if the learning was not well processed; hence the cognitive learning is crucial. At the University of Limpopo, the classification module is

designed in a way that students are introduced to the module through theory and then advance to practical part of the module. During practical activities, students are able to revisit and apply their prior learning to enhance their learning experiences ensuring proper acquisition of the classification skills. Cognitive learning theory has made immense contributions in the field of education wherein approaches to teaching and learning had to be adjusted to and align to the theory. The theory calls for lectures to have a student-centred teaching approach; hierarchically sequenced lessons to lead the students to identify the required relationships among the lesson contents (cognitive task-analysis procedures); and to facilitate learning that enable students to retrieve prerequisite abilities and incorporate actual life activities (Ertmer & Newby, 1993: 60; Mhrka, 2014: 30). This theory condones the active participation of the student in the process of the construction of knowledge even though it focuses more on lecturing/teaching rather than learning (on the part of the student).

To compensate for this gap of student focus, another theory that underpins this paper was deemed necessary which is the constructivist theory of learning. The main idea behind teaching and studying methods is to get the students to participate actively and take responsibility for their own learning. This paper relates to constructivism as it is a learning theory that attempts to explain how students learn by constructing understanding for themselves (Pintrich, 2004).

The implications of this theory for education practice is that students should be placed in learning situations where they have to stretch their understanding capabilities and go beyond comfortable concepts (Welman, 2013: 07). Although the constructivist learning theory provides a view on learning and not on teaching, it prompted researchers to think about appropriate teaching methods to foster students' active knowledge (Baeten, Struyven & Dochy, 2013: 14). It is the duty of lecturers to employ teaching methods which help students to construct their own knowledge by experiencing and interacting with the environment. This however, does not mean that Classification module lecturers should be entirely removed from the learning processes. Rather, it means that lecturers should be accompanied by assignments in which students must reflect on and use the information acquired in the lectures (Alemu, 2010). At the University of Limpopo, lectures are followed by hands on practice assessments, assignments and tests.

4 TEACHING AND LEARNING METHODS IN LIS SCHOOLS

Effective teaching methods enhance the learning experiences of students. Due to different learning styles, a lecturer can use more than one teaching method in one lesson. Maja (2006: 36) concurs that lecturers should be flexible in their teaching methods because different teaching methods are appropriate for addressing different situations.

The Lecture method: Lecturing remains one of the more popular methods for transmitting information and ideas by teachers, trainers and speakers. This method is economical, can be used for a large number of students, material can be covered in a structured manner and the teacher has a great control of time and material (Sajjad, n.d: 09). A study conducted by Marmah (2014) investigated undergraduate students' perceptions about the lecture as a method of teaching in tertiary institutions. The result of the study indicated that there is no statistical significance difference among students with regards to their negative perception about the lecture method. In relation to these findings, Anyanwu and Iwuamadi (2015) reiterated that in a lecture approach, the teacher remains the primary provider of information and facts for learning. Another study undertaken in Malaysia by Ismail *et al*, (2014) explored the preference

of teaching and learning methods at Universities Sultan Zainal Abidin (UniSZA). The results of the study showed that most respondents chose lecture as the most preferred teaching and learning method. The lecture method usually is one-way communication as such should be complemented with other active methods which are student-centred to encourage participation.

Discussion: According to Oche (2012: 480), discussion method involves a group of people in a class who come together to exchange ideas, facts, opinions and expressions orally about a topic of mutual concern and interest under a guide. This method encourages students to be independent of the lecturer and discover knowledge and also see relationship on their own (Oche, 2012: 480). A study conducted by Musa *et al.* (2015) in among some tertiary health institutions in Sokoto State Nigeria proved that students prefer discussion method than all other forms of teaching methods. The students' reasons for preferring this method of teaching include the fact that discussion methods has to do with more participation of students, more effective learning, students get ideas from each other and therefore need not rely completely on all the information given to them by their lecturers and also that discussion method develops creativity among students. Domineering characters/personalities should however be controlled during the discussion sessions to allow all students to contribute and learn fairly.

Role Play: In this method the lecturer composes a real-life situation and a cast of characters. The students adopt the different characters, find out the required information on the characters, and then act out a scene (Bigabwenkya, 2013: 85). This method considered as an important teaching tool to develop communication skill among students. It can be deduced from these explanation that role play can be achieved by creating hypothetical situations and circumstances played practically in a classroom which include a combination of theory and practice.

Case study: This method is basically used to develop critical thinking and problem-solving skills, as well as to present students with real-life situations (Sajjad, n.d: 11). Case-based teaching helps students apply theory to practice and evaluate the applicability of those different theories to real-life situations. Students also learn that there are many different solutions to one problem (Bigabwenkya, 2013: 85). They also found that lower performing students may benefit more from cases than higher performing students.

The learning of classification demands the active involvement of both the student and the lecturer to aid the constructive process. Ocholla, *et al* (2015) report on initial findings of a three country (South Africa, Brazil and United States) study on cataloguing and classification education revealed that cataloguing and classification courses in South Africa are taught mainly through lectures and manual exercises. Other methods include group discussions, practical and limited online assignments, workshops, seminars, projects, case studies, and quizzes. In Bangladesh library schools, Rahman, Khatun and Mezbah-ul-Islam (2008) found that the lecture remains the predominant teaching method; the departments or institutes do not organise any seminars, colloquia, or workshops to supplement lecture classes.

7 DISCUSSIONS OF RESULTS

This paper adopted both quantitative and qualitative approach. This means that a mixed method was used. In the context of this study, the questionnaire was distributed and completed by 152 consisting of 127 Undergraduate and 25 Postgraduate Diploma students who registered for the module at the University of Limpopo in 2015 academic year. Semi-structured interviews were conducted with one lecturer and two librarians who taught the module. Purposive sampling was

employed to select Information Studies students as they were the affected, as such they would be able to provide the best information to achieve the objectives of the study.

As part of exploring the perceptions of students towards the Classification module, respondents were asked about the importance they attach to the module. The results reveal numerous encouraging findings in the perceptions of the importance and classification. Hundred and twenty-seven (84%) indicated the classification module is important as it can be applied in diverse areas of information professional work. These findings are different from Dadzie (2008) where respondents indicated that some core modules like *Theory and Practice of Classification* are not useful and should be dropped or modified. This implied that respondents did not see the importance of these courses which form the bedrock of library activities. The results also showed that more than 50% of the respondents regard classification as interesting even though there was an indication that the module seems to be confusing. A reasonable number of 46% stated it is easy to understand Classification theory even though they stated that there is not enough time to cover all aspects required.

In this study, a large number of respondents were satisfied with the character of the lecturers. An overwhelming majority of the respondents (92%) strongly agreed that the lecturer is approachable. Approachability of the lecturer is an advantage as students could not be afraid to ask questions in class or consult outside class. According to Folashade (2014: 146) students' positive attitude can be enhanced by lecturer's positive attitude towards teaching of cataloguing and classification and this can be done through lecturer's helpful behaviour, enthusiasms, good method of presentation, concern for students and teacher knowledge of the subject matter. It appears that the Classification lecturer in this study possesses the requirements mentioned by Folashade (2014) as 78% of the respondents strongly agreed that the lecturer is knowledgeable regarding the content taught and 49% strongly agreed that the lecturer is able to address issues of confusion in class. The findings of the semi-structured interview also revealed that the lecturer is having extensive experience as a classifier. The finding is in accordance with a survey conducted by Onyancha and Minishi-Majanja (2009) which involved over 55 LIS schools in Africa which found that LIS educators in Africa generally have PhDs and are suitably qualified for appointments in academia.

To gain insight into the respondents' level of understanding of some important aspects of classification, respondents were to indicate the extent of proficiency with regard to the classification process. The majority (87%) of the respondents indicated that they were able to follow classification process to some extent while they still find difficulty in determining the subjects. Taylor (2006) argues that DDC have more difficulties in number building. Thus, students might find it difficult to use the four volumes set. This is a challenge as the correct classification process is dependent on correct subject analysis. The main purpose of classification is to assign class numbers, according to specific subject areas, on the library material to allow easy shelving and retrieval.

The classification process starts by determining the subject of the source. Failure to determine the subject will mean that the library material will be misplaced. Similar findings were revealed in a study by Cabonero and Dolendo (2013) who found subject analysis as a challenging part where the students are facing lack of efficiency when looking for key words in the title, table of content, abstract, foreword, introduction, conclusion and cover. What is difficult to students is that some titles do not represent the content of the book.

The findings of the study indicate that respondents were proficient to some extent. This means that respondents were not confident in their classification proficiency. The finding confirms Ogunniyi's (2006), Okoroafor's (2009) and Ogunniyi's (2015) discoveries that undergraduates of the University of Ibadan (UI) and Delta State University (DELSU) library schools, and Babcock University and University of Ibadan (UI) and students in library schools in Southern Nigeria had average performances in Cataloguing and Classification modules. The four volumes of the DDC might also contribute to this lack of confidence as it consumes time and needs one to know the contents of each volume. Online DDC is not used for teaching due to financial constraints. The use of ICT learning tools can enhance the learning of classification module. In support of this, Joseph, Yeboah-Appiagyei and Fentim (2014) found that the students were in support of the ideas that the availability of ICT facilities could help to improve upon their academic performance. Very few (17%) indicated that they sometimes find it difficult to interpret Dewey Decimal Classification (DDC) instructions and also to apply classification principles.

Generally most (83%) respondents rated their classification knowledge to be moderate as they indicated that application of classification principles and notation building instructions were confusing. The results showed that it is easy to understand the theory but somewhat difficult to apply it such as determining and choosing the main class number or building and added entry notation where the source covered a broader or multiple subject. This was true as the lecturers in their interviews, indicated that the students found it difficult to determine the subject as they were unable to critically think beyond the source itself. A librarian added that, "The students only prefer straight forward titles which does/do not require subject analysis".

To enhance respondents' learning, the results show that respondents strongly agreed that they needed extra classes so that they would have hands on practice. The respondents were also asked whether the use of ICT learning tools can enhance the learning of cataloguing and classification, many respondents strongly agreed with the increased use of technology.

When asked about teaching methods used in the classification module, all respondents agreed on the importance of the lecture method, whole discussion, and class practical exercises. A high percentage of 73% indicated that group discussions are also used. This is line with the results from the interviews wherein the lecturer and librarians agreed that they used lecture method, class practical exercises, and debates. Despite the teaching methods used, the most preferred teaching methods by students were lecture method, class practical exercises and group discussions respectively. Respondents were also asked on their opinions regarding the role of the lecturer in learning classification module. Some respondents stated that the lecturer was able to give support in completing the tasks and available for consultation. They also preferred to practice on their own.

Challenges facing the students were indicated from the results as lack of skill in interpreting DDC instructions. The limited English proficiency might also lead to this situation. The language of most textbooks in South African academic libraries is commonly English. Research shows that students experience challenges in expressing themselves and understanding some concepts in English (Mumbembe, 2012; Ramapela, 2014). The jargon/terminology used in the classification module is different from the daily usage of English. Students have to understand the language first and then the learning resource. Almost half (49%) of respondents find the DDC arrangements difficult to understand. There is an initiative by a librarian in one of the libraries to facilitate the conversion of the DDC into some of the vernacular languages used in the country. This is still to be tested if it may enhance learning.

This takes us back to the issue of four volumes DDC set and students have to know the contents of both the volumes. If for example the student does not know where to find Class 700, it means that the student might start by checking volume 2 and by the time the student go to Volume 3; more time would have been consumed. Furthermore, the notation building process contradicts the arrangement of DDC. For example, after identifying the subject, the student has to consult the Relative Index (Volume 4) then Schedules (Volumes 2 and 3).

5 CONCLUSIONS

It has been noted that lecture method is the mostly used teaching method in classification. The performance of students in classification is moderate and the attitude towards the module was found to be negative. The key factors that determine this include the lack of ICT tools to enhance learning, lack of commitment and the poor English proficiency.

In addition recommendations that can assist the University of Limpopo's Programme of Information Studies, in particular, to resolve the challenges facing the teaching and learning of classification module will be provided. It is recommended to:

- Introduce ICT to enhance learning. This includes use of Web Dewey, online tutorials, Computer based practical exercises.
- Experiment with the Translated DDC to facilitate learning in mother tongue. This has the potential to improve understanding of basic concepts and the instruction given to build notations.
- Offer more training from a practitioner's perspective, by involving passionate classifiers, to inculcate the love for Classification.

In addition, Mohammed (2008) contends that there is no doubt that the library and information professionals need to be practical in orientation and actions, there is the need for relevant laboratories in LIS schools. However, this is not available at the University of Limpopo's Programme of Information Studies. Even though the University does not have a computer laboratory specifically for LIS students, students have access to library facilities such as computers. The classification laboratory equipped with computer terminals for simultaneous users, connected to the Internet through a local area network (LAN), is recommended for the Programme of Information Studies at University of Limpopo. The provision of computer laboratory for staff and students' use will motivate them to teach and learn respectively.

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References

Aina, L.O. 2004. *Library and information text for Africa*. Ibadan: Third World Information Services Limited.

Alemu, B.M. 2010. *Active learning approaches in mathematics education at universities in Oromia, Ethiopia*. Doctoral Thesis in Psychology of Education. Pretoria: University of South Africa.

Anyanwu, S.U. & Iwuamadi, F.N. 2015. Student-centred teaching and learning in higher education: transition from theory to practice in Nigeria. *International Journal of Education and Research*, 3(8): 349-358.

Baeten, M., Struyven, K. & Dochy, F. 2013 Student-centred teaching methods: can they optimise students' approaches to learning in professional higher education? *Studies in Educational Evaluation*, 39: 14-22.

Bigabwenkya, S. 2013. *Public university education: an analysis of capability expansion among students in Uganda*. Doctoral Thesis in Development Studies. Pretoria: University of South Africa.

Bello, M.A. & Mansor, Y. 2011. Cataloguer mentoring a survey of cataloguers' perception on mentoring for skills development in academic libraries in Nigeria: an exploratory study. *The International Information and Library Review*, 43(3): 159-168.

Cabonero, D.A. & Dolendo, R. B. 2013. *Cataloguing and classification skills of library and information science practitioners in their workplaces: a case analysis*. Available from: <http://digitalcommons.unl.edu/libphilprac/960>. (Accessed 16 March 2015).

Dadzie, P.S. The renaming of the library school in Ghana - any lessons for administrators? *African Journal of Library & Information Science*, 18(1): 39-50.

Ertmer, P.A. & Newby, T.J. 1993. Behaviorism, cognitivism and constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly*, 6(4): 50-72.

Eryaman, M., & Genc, S. 2010. Learning theories. In C. Kridel (Ed.), *Encyclopedia of curriculum studies*. Thousand Oaks, CA: Sage.

Esse, U.C. 2013. Current trends in cataloguing and the challenges of a cataloguer in the digital age. *Journal of Information and Knowledge Management*, 4(2): 16-23.

Folashade, Y.K. 2014. Attitude of Library and Information Science students on industrial training towards cataloguing and classification: a study of Lagos State Polytechnic Library. *International Journal of Management Sciences and Humanities*, 2(1): 139-149.

Gan, Z. 2012. Understanding L2 speaking problems: implications for ESL curriculum development in a teacher training institution in Hong Kong. *Australian Journal of Teacher Education*, 37(1): 42-59.

Geche, T.J. 2009. *Learning styles and strategies of Ethiopian secondary school students in learning mathematics*. Master's Dissertation in Education. Pretoria: University of South Africa.

Ismail, S., Rahman, N.I.A., Mohamad, N., Jusoh, N.M., Hood, A.I.B., Arif, L.A.B., Abdullah, W.S.A.B.W., Zainal, Z.N.B., Islam, M.Z., Dali, W.P.E.W. & Haque, M. 2014. Preference of teaching and learning methods in a new medical school of Malaysia. *Journal of Applied Pharmaceutical Science*, 4(2): 048-055.

Joseph, O., Yeboah-Appiagyei, K., & Fentim, D.B. 2014. The school environmental factors that affect the academic performance of senior high Financial Accounting students in Tamale Metropolis in the northern region of Ghana. *Advances in Social Sciences Research Journal*, 1(7): 133-144.

Maja, R. 2006. A teaching and learning programme to address learning style diversity in the Natural Sciences at secondary school level. Doctoral Thesis in Teaching and Learning. Vanderbijlpark: North-West University.

Marmah, A.A. 2014. Students' perception about the lecture as a method of teaching in tertiary institutions: views of students from College of Technology Education, Kumasi (Coltek). *International Journal of Education and Research*, 2(6): 601-612.

Mihrka, A.A. 2014. *Learning styles and attitudes towards active learning of students at different levels in Ethiopia*. Doctoral Thesis in Education. Pretoria: University of South Africa.

Mkonto, P.N. 2010. *The development and evaluation of a learning styles assessment tool for the South African higher education context*. Doctoral Thesis in Education. Cape Town: University of Western Cape.

Mohammed, A.A. 2014. *A model for teaching learning methods of Geography in the Ethiopian colleges of teacher education*. Doctoral Thesis in Education. Pretoria: University of South Africa.

Mumbembe, L. 2012. *An investigation into the language challenges faced by Congolese students at the University of Fort Hare in South Africa*. Master's Dissertation in Applied English Linguistics. Alice: University of Fort Hare.

Musa, M.A., Salamatu, M. & Danjuma, B. 2015. Teaching methods in tertiary health institutions; the need for appraisals. *Asian Journal of Multidisciplinary Studies*, 3(2): 1-4.

Oche, E.S. 2012. Assessing the relative effectiveness of three teaching methods in the measurement of student' achievement in Mathematics. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 3(4): 479-486

Ocholla, D.N., Ocholla, L., Olson, H.A., Glover, J.R. & Guimarães, J.A. 2015. A comparison of Cataloguing and Classification Education (CCE) in Library and Information Science in South Africa, Brazil and the USA (SOBUSA): an overview. *African Journal of Library, Archives and Information Science*, 25(1): 15-27.

Ocholla, L. & Ocholla, D. 2011. Cataloguing and classification education and training in Library and Information Science/Studies Departments in South Africa. *A paper presented at the Crimea conference, Sudak, Ukraine, 4-12 June 2011*. Available from: <http://www.gpntb.ru/win/inter-events/crimea2011/disk/097.pdf> . (Accessed 15 January 2015).

Ogunniyi, S. O. 2006. *Perception of cataloguing and classification courses by undergraduate librarianship students in Nigeria: case study of University of Ibadan and Delta State University, Abraka library schools*. Master's Dissertation in Library and Information Studies. Ibadan: University of Ibadan.

Ogunniyi, S.O. 2015. Undergraduates' attitude as correlates of academic achievement in cataloguing and classification in library schools in Southern Nigeria. *Library Philosophy and Practice (e-journal)*, Paper 1266. Available from: <http://digitalcommons.unl.edu/libphilprac/1266>. (Accessed 15 September 2015).

Okoroafor, M. N. 2009. *Librarianship undergraduates' assessment of adequacy of teaching and resources for study cataloguing and classification in library schools in South Western Nigeria*. Master's Dissertation in Library and Information Studies. Ibadan: University of Ibadan.

Onyancha, O.B. & Minishi-Majanja, M.K. 2009. Africa: LIS education. In I. Abdullahi (Ed.) *Global Library and Information Science: a textbook for students and educators*. Munich: KG Saur.

Pintrich, P. R. 2004. A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4): 385-407.

Ponticell, J.A. 2006. Learning theories. In F.W. English (Ed.) *Encyclopaedia of Educational Leadership and Administration*. Thousand Oaks, CA: Sage.

Rahman, A. I. M. Khataun, M. & Mezbah-ul-Islam, J. 2008. Library education in Bangladesh: strengths, problems, and suggestions. *Library Philosophy and Practice*. Available from: <http://www.webpages.uidaho.edu/~mbolin/rahman-khatun-mezbahulislam.htm> . (Accessed 25 November 2015).

Ramapela, S.S. 2014. *The influence of language competency on learner academic achievement: a case study of grade 12 learners and educators in Capricorn District, Limpopo Province, South Africa*. Doctoral Thesis in Education. Pretoria: Tshwane University of Technology.

Sajjad, S. n.d. *Effective teaching methods at higher education level*. Available from http://www.wfate.org/papers/Research_paper_Teaching_methods.pdf. (Accessed 14 May 2015).

Welman, A.M. 2013. *The learning experience of third-year Baccalaureate Nursing students on High Fidelity Simulation*. Master's Dissertation in Nursing. Bloemfontein: University of Free State.