PERCEPTIONS OF THE ADEQUACY OF TEACHING AND LEARNING RESOURCES FOR UNDERGRADUATE MEDICINE (MBCHB) AND NURSING (BSCN) PROGRAMMES IN TWO KENYAN PUBLIC UNIVERSITIES

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ABSTRACT

High students' intake in Public Universities has led to reduced learning space and sharing of few teaching/learning resources by both lecturers and students. The purpose of this study was to assess the adequacy of teaching and learning resources for effective implementation of the MBChB and BScN programmes in two public universities in Kenya. The specific objectives of this study were to assess the perceptions of the adequacy of teaching resources in the MBChB and BScN programmes by lecturers, assess the perceptions of the adequacy of learning resources by students in the MBChB and BScN programmes, identify the challenges encountered by lecturers in acquiring teaching resources and compare the perceptions of adequacy of teaching resources in both Universities. The study was conducted in Moi University (A) and University of Nairobi (B). The study design used was mixed methods research design. Convenience (non-probability) sampling was used to select 100 University lecturers (50 from each university) and 50 from each school as participants of the study. Purposive sampling was used to select students for Focus Group Discussions. 38 students' representatives in the MBChB and BScN programmes (2 representatives per academic year) were interviewed using an interview guide. There were four Focus Group Discussion (FGD) groups with 8 to 10 students per FGD. Data was collected from university lecturers of the MBChB and BScN programmes in the two Universities, using self-administered closed-ended structured questionnaires. Findings from both Universities showed that 88% of lecturers perceived that teaching resources were inadequate, 77% perceived that lecture room space was inadequate and 84% that skills labs were not well equipped. FGDs revealed that students. A comparison between the two Universities revealed that University A had better equipped skills laboratories while University B had a better stocked library. Conclusion: there are inadequate Teaching/learning resources in public Universities which are attributed to high student intakes and financial constraints.

Key Words: *perceptions, adequacy, teaching/learning resources, lecturers, students*

INTRODUCTION

In order for effective learning to take place in any learning institution, there must be enough resources to facilitate learning (Amri et al., 2005). Teaching and learning resources are very important in Health Education. According to Mutema et al., (1999), learning resources play a major role in problem-based learning. Apart from availability of learning resources, adequacy, relevance and usability of such resources are very critical in teaching/learning situations (Mutema et al., 1999).

There are five major categories of teaching/learning resources. The first category is that of human resource which includes administrative team, lecturers and support staff. The second category includes learning resources like audiovisual aids including projectors, books and periodicals (Quinn

and Hughes, 2007). The third category is physical plant or classroom space and also includes satellite campuses and practical facilities for (Kibore et al, 2015). The fourth type of resource that all other resources depend on is financial resources. The two main categories of financial resources include capital budget and operating budget (Tappen, 2001). The fifth type is time as a resource (Locke, 2018). Though not always viewed as a resource, it is very necessary that instructors plan time for their students, not only for classroom instruction but also for individual couching.

Adequate teaching and learning resources refer to the availability of the above mentioned resources for students' learning. For every group of students there must be well qualified lecturers, adequate classroom space for a specified number of students, science labs, skills lab, computer lab and a well-equipped library (Amri et al., 2005). In addition to this, every lecture room should have enough teaching aids for use by teachers including Chalk boards/white boards, Overhead projectors, Laptops, Liquid Crystal Display (LCD) projectors, Screens and Flipcharts. If any lecture room falls short of these requirements, then there is inadequacy of teaching resources (Mbirithi, 2013).

A study done in University of Minnesota (USA) revealed that students who studied in a technologically enhanced classroom with large projector screens and marker boards had higher assessment scores compared to those who were taught in a traditional classroom (Perks et al, 2016).

Another study done by Adeoye and Popoola (2011) in Nigeria revealed that the Schools of Nursing had what they called 'libraries' but not all were established libraries in terms of resources. This led to lower academic standards of the students than what was expected. Another study done by Gudo (2011) on issues of quality education in private and public Universities revealed that public Universities did not have adequate physical facilities and other teaching resources for offering services to their students (Gudo et al, 2011).

According to the Kenyan Nation newspaper dated 3rd October, 2015, there are a number of important challenges facing Universities in Kenya. These include the demand for access and social equity, funding and the cost to students in terms of fees, governance and internal management, the changing roles of academics, demographic changes among academics, inefficiency and ethnicity.

BROAD OBJECTIVE

The purpose of this study was to assess the challenges that MBChB and BScN lecturers in Public Universities face in acquiring and utilizing teaching and learning resource.

SPECIFIC OBJECTIVES

1. To assess the perceptions of adequacy of teaching resources in the MBChB and BScN programmes by lecturers in the two Public Universities.
2. To Identify the challenges encountered by lecturers in acquiring and utilizing
3. teaching resources.
4. Compare the perceptions of the adequacy of teaching and learning resources by lecturers and students between the two Schools in the two Universities.

PROBLEM STATEMENT

The number of students in health education is growing rapidly in Public Universities. As these numbers continue to increase this has led to problems like crowding in classrooms, libraries, computer labs and inadequate laboratory facilities (Ngatia et al., 2009)). Libraries are also not well equipped with the current textbooks and journals. Learning resources remain limited and therefore do not correspond to the number of students. The ratio of the number of students per lecturer shows that one particular lecturer has to take care of a large number of students. The commission for University Education (CUE) and the Kenya Medical Practitioners and Dentists Board recommend adequate classroom space, science labs, skills labs, enough lecturers and adequate teaching resources for effective learning to take place. The Nursing Council of Kenya (NCK) recommends a ratio of ten students per clinical instructor and 40 students per class (Ogeng'o, 2015). Recruitment of lecturers does not match the increase in the number of students which should actually be the case (Momanyi, 2015). Clinical sites, especially hospitals are also getting crowded with the increasing number of students, therefore hospitals and other health facilities need to plan for more students for clinical experience than the ones they planned for before (Lippincott, 2017). Due to these challenges, learning is no longer of the preferred quality according to the required standards.

LITERATURE REVIEW

Teaching and learning resources are all items or combination of items which enhance teaching and learning. They are the backbone for teaching and training health care professionals (Ngatia et al., 2009).

Types of Teaching Resources

There are five main categories of teaching resources.

1. The first category is that of human resource which includes administrators, lecturers and support staff.
2. The second category includes teaching resources including projectors, books and periodicals (Quinn and Hughes, 2007).
3. The third category is physical plant or classroom space and also includes satellite campuses and practical facilities for students.
4. The fourth type is financial resources which includes capital budget and operating budget (Tappen, 2001).
5. The fifth type is time as a resource.

Availability of Teaching Resources

In order for effective teaching and learning to take place there has to be enough resources. Every teacher should aim at giving the best to his/her students in order to enable them to remember and practice what they have been taught.

Teaching and learning resources are the backbone for teaching and training health care professionals. They enhance acquisition of relevant knowledge and skills, facilitate the delivery of information and influence development of attitudes (Ngatia et al., 2009).

Teaching resources for enhancing cognitive learning are divided into two main categories:

1. Projected aids
2. Non-projected aids

Examples of projected aids include the Overhead projector (OHP), Kaleidoscopes, films, video cassettes and slides. These teaching aids are the ones commonly used Universities. Non-projected aids include the chalkboard, white board, magnetic boards, pictures, Flipcharts, posters, handouts, flannel boards and 'the real thing' including food substance (Amri et al., 2005). All these teaching resources enhance understanding of information which in Bloom's Taxonomy is in the cognitive domain. A very important teaching resource for health professionals is a skills lab. A skills laboratory is a learning resource centre that provides an environment for learning clinical skills where students can practice without jeopardizing patient care or provoking adverse effects. It reduces the difficulties experienced by students when they first encounter patients in wards and clinics and improves procedural skills (Omaswa et al., 2014).

Teaching resources that enhance acquisition of skills and attitudes include the following:

1. Manikins of different types including adult male/female, child, baby doll etc.
2. Different types of instruments including dressing forceps, dissecting forceps, artery forceps, retractors etc.
3. Hospital beds and coaches, trolleys of different kinds Mayo's trolley, dressing trolley
4. Trays of different kinds including catheterization tray, stitch-removing tray, the General set tray, delivery tray etc.
5. Computers, printers and scanners

All these resources help students to learn by doing things practically thus attaining proficiency in skill. Every school and department should have enough teaching resources in order to facilitate students' learning. As the numbers of university students continue to grow rapidly there is need to also increase teaching resources so as to cater for them effectively.

Without appropriate teaching and learning materials, health care professionals encounter many problems in training and practice. Even when the materials are available there is need for periodic review and production of new ones (Ngatia et al., 2009).

Instructional resources are not only expected to be available to sufficient levels to enable teaching and learning to properly take place. They should be adequate enough for utilization in teaching and learning (Igwe in Martin's Library, 2004).

RESEARCH METHODOLOGY

This study used a mixed methods study design. Sampling of the participants employed convenience sampling. Convenience (accidental) sampling was used as a non-probability method of sampling and involved readily available people or objects for a study (Nieswiadomy, 2010). In convenience sampling, available subjects are simply entered into the study until the desired sample size is reached (Burns and Grove, 2005). The reason why convenience sampling was used is because lecturers are not always in their offices when one may need to see them. They could be in class or instructing students in the clinical areas. The study was conducted in two Kenyan Public Universities namely Moi University (University A) and University of Nairobi (University B), in the Schools of Medicine and Nursing. A sample size of 50 lecturers was selected from each University to participate in the study from the School of Medicine and School of Nursing. Data collection for the quantitative part of the study was done using closed-ended structured questionnaires. The drop and pick method was used to administer the structured questionnaires to the lecturers. Qualitative data was obtained from purposively selected 38 students' representatives in the MBChB and BScN programmes (2 representatives per academic year) using an interview guide. There were four Focus Group Discussion (FGD) groups with 8 to 10 students per FGD. Quantitative data was coded and entered into Microsoft Excel Spread-sheets. It was later analyzed using SPSS version 22 by frequencies, means and percentages and then presented using prose, tables, pie charts and graphs. Qualitative data was coded and analyzed contextually (Creswell, 2008). Qualitative data obtained from focus groups was transcribed from the recorded audio tapes. The researcher listened to the audio-tapes and transcribed the data into a transcript. The transcript was then summarized and put into context. After this ideas were organized into patterns and trends that constituted the themes.

RESEARCH RESULTS

76.6% of lecturers from both Universities perceived that classroom space was inadequate when compared to the number of students that they taught. Majority of the lecturers from both Universities (88%) felt that they did not have enough instructional materials for use in teaching. 84% of lecturers from both universities perceived that their skills labs were not well equipped. Most lecturers from both universities felt that students did not have enough computers at 88%. In both Universities, 91% of lecturers felt that the proportion of workload was not good as compared to the number of lecturers. Majority of the lecturers (77%) disagreed that lecturers are replaced within 3 months when they leave the University. Lecturers also perceived that there is a lot of sharing of teaching materials in their Universities at 69%. Majority of lecturers from both Universities stated that they are inconvenienced by sharing of teaching materials at 62.5%.

A comparison between the two Universities revealed that students from University A perceived that the library had old text books and few students' computers, and there were little equipment in the skills laboratories. 80% of the students in University B reported crowding in classrooms and clinical sites, and needed more computers in the library. Medical students in University B stated that they did not have a skills laboratory of their own but shared the one in the School of Nursing. A further

comparison between the two Universities indicated that University A had better equipped skills laboratories while University B had a better stocked library.

Qualitative data was coded and analyzed contextually (Creswell, 2008). This data which was obtained from Focus Groups was transcribed from the recorded audio tapes. The researcher listened to the audio-tapes and transcribed the data into a transcript. The transcript was then summarized and put into context. After this ideas were organized into patterns and trends that constituted the themes.

    Theme 1: Adequacy of space and learning resources in the lecture rooms
    Theme 2: Adequacy of space and learning resources in the Skills Lab
    Theme 3: Adequacy of computers in the computer labs
    Theme 4: Adequacy of library stocking for current text books, journal and   periodicals
    Theme 5: Time Management by lecturers

DISCUSSION OF THE FINDINGS

It was evident from this study that teaching resources were inadequate in both Universities. Classroom space was a major concern in the University B at the School of Medicine. This was attributed to high numbers of students' admissions. Other teaching resources that lecturers perceived to be inadequate included the number of lecturers themselves, Skills Laboratory equipment, computers for students in the computer labs. Lecturers also perceived that it was necessary for the Universities to own some laptops for use by lecturers in class just like the LCD projectors. Some lecturers also felt that there was need to increase the number of LCD projectors in the University to avoid too much sharing of the same.

These findings are in line with a study carried out by Gudo et al., (2011) that revealed that both private and public Universities had lack of enough lecture rooms and this hindered effective teaching and learning.

The findings are challenged by a study done by Rokni and Karimi (2013) who found that the use of visual materials or visual elements in teaching and learning had a positive result because use of visual aids helps to improve students' learning in several ways.

This inadequacy of teaching and learning resources could be attributed to financial constraints that public Universities in Kenya have been experiencing. Admitting large number of students with scarce financial resources leads to inadequacy of teaching resources. The Kenyan Daily Nation Newspaper of Wednesday March 14, 2015 wrote that 16 Public Kenyan Universities were experiencing deep financial crisis and therefore the quality of education they were offering was questionable (Wanzala, 2015).

Lecturers believed that the process of trying to acquire new teaching equipment was long and tedious. This is mainly attributed to the many signatures that must be obtained from signatories in different offices in order to approve the purchase of materials and equipment. The fact that the

procurement process is long and tedious makes acquisition of materials and equipment difficult or slow.

Majority of the lecturers also stated that the replacement of lecturers too longer than three months. Lecturers are the main type of human resource that is engaged in teaching.

This could be attributed to the duration of the recruitment process which requires shortlisting and interviewing of prospective workers. It could also be attributed to the financial constraints that most public Universities are experiencing.

CONCLUSION

There were inadequate teaching resources in both Universities which included classroom space and poorly equipped skills laboratories. There was congestion of students in classrooms (University B), poorly equipped skills laboratories, inadequate number of computers and old text books (University A). Financial constraints in Public Universities coupled with high students' admissions may be the main contributing factor to resource inadequacy.

RECOMMENDATIONS

1. Numbers of Medical students especially in University B should be reduced during admissions. This will reduce the need for many microphones in lecture halls and also congestion during ward rounds.
2. Establish a skills lab for Medical students urgently in University B to avoid the sharing with school of Nursing. This is because their academic needs of the two groups are different..
3. Purchase more manikins for Medical students in University B in the skills Laboratories.
4. Increase the number of permanent lecturers in each department so that work load is lighter
5. There is need to stock the library in University A with new text books and do away with the old ones.
6. In both Universities there is need to expand the computer labs and purchase new computers for the students.

7. Replace lecturers within 3 months with people who have teaching experience or Medical education.
8. Purchase lap tops for lecturers for class room use only.
9. Lecturers should plan for their time out with students before they go to seminars and conferences and make up classes be out of lunch hour.
10. There is need for better planning for diagnostic lab classes in order to reduce congestion.
11. Spare batteries should be bought for the microphones for use in large theatres. It is important to buy enough batteries for microphones that can last through all Trimesters in a year.

12. Engage more NGOs in donations of teaching/learning resources especially students' computers and books for University A.

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