Knowledge and Attitude of Tutors on Active Teaching and Learning in Health-Training Institutions

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Abstract

The study assessed tutor's knowledge and attitude on active teaching and learning (ATL) approaches in health training institutions. It established and recommended supportive strategies that promote implementation of ATL process.

The study used descriptive and cross sectional survey designs for data collection in October 2016, using a questionnaire from 40 respondents selected using purposive, and random sampling techniques, analysed using SPSS and presented in tables and figures.

The study found 34 (85 %) respondents knew the meaning of ATL, 6 (15%) tutors and clinical instructors did not understand ATL: tutors perceived ATL positively than clinical instructors, 32(89%) were using lecture method. Therefore, study concludes that, tutors and clinical instructors are not well sensitized on ATL leading to continued use of traditional methods, hence less practice of ATL.

The researcher recommends that ATL be introduced to all teachers through Continuous Professional Development (CPD) and Refresher Programs to effectively implement ATL.

Introduction

Introduction of study

Globally, there has been a realization that many health professionals cannot effectively manage the health problems of their patients and communities because they are not adequately trained in some essential competencies required for their jobs. Gaps in key competencies, including effective communication skills to patients and families as well as professionalism, were described in medical education programmes. This led the institutions adopting Competency-Based Medical Education (CBME), that was to be achieved through use of active teaching and learning approaches, (Kiguli S, 2014).

Teaching and learning seem to have not yielded good fruits because it is not focusing on provoking learners' independent reasoning, problem solving and critical thinking,(Byabazaire, Oyo, & Mijumbi, 2013). Therefore, education in schools and colleges with greater emphasis on health training institutions is changing rapidly, because there is mounting evidence that supplementing or replacing teachers with active teaching and learning strategies and engaging students in discovery and scientific process improves learning and knowledge retention, (Byabazaire, et al., 2013).

In teacher –centred classroom, teachers are the primary source of knowledge; rote learning or memorizing teacher notes or lectures is the norm. Learner centered learning, on the other hand, allows learners to actively participate in learning processes, it promotes distinctive learning styles, and requires students to make their own meaning' of what they are learning.

Learner-centred learning is based on constructivism. Constructivist learning theories see learning more and more as an active process whereby the learner constructs the knowledge in interaction with his/her surroundings, (Wang & Ha, 2013).

The ministry of education and sports developed the 10 year BTVET strategic plan dubbed skilling Uganda, emphasizing a paradigm shift in the BTVET sector. Prior to the implementation of the plan,

existing technical and vocational training programmes were theoretical and not relevant to the world of work and hence students acquired certificates and not skills, (MOE&S, 2014).

According to Kock, (2004), educational quality improvement includes a shift from the traditional teacher centered teaching towards a learner-centered approach. And Angele, (2010) argues that, the interaction between teachers and students greatly influence learning and motivation.

The government has introduced competence based education and training hinged on a modular curriculum that ensures that the content is relevant to the world of work and assessment is based on industrial work standards, (MOE&S, 2014).

Therefore, this research sought to find out if tutors have knowledge and attitude of active teaching and learning (ATL) in four of the health-training institutions in Kampala District, in order to address the demand of producing quality of health workers.

Problem statement of study

Globally, there has been a realization that many health professionals cannot effectively manage the health problems of their patients and communities because they are not adequately trained in some essential competencies required for their jobs. Gaps in key competencies, including effective communication skills to patients and families as well as professionalism, were described in medical education programmes. This led the institutions adopting Competency-Based Medical Education (CBME), that was to be achieved through use of active teaching and learning approaches, (Kiguli S, 2014).

Four of the major goals of science and technology education today are to promote student's active learning as a way to improve student's conceptual understanding and thinking skills. Although there is a clear evidence for the benefits of active teaching and learning, most tutors in higher education still adhere to traditional teaching methods, (Miri & Wiser-Biton, 2009). This is because they passive the method as time consuming and not applicable to the high number of student in classes among many other reasons.

Specific objectives

1) To establish the tutors knowledge level on active teaching and learning process in the health training institutions in Kampala District.
2) To determine the tutor's attitude towards active teaching and learning process in the health training institutions in Kampala District.

Justification of the study

Literature showed gaps in the researches done regarding active teaching and learning in health training institutions of Uganda despite the development of competence based curriculums hinged on modular system, Matua, (2013). The study aimed at establishing if tutors have clear knowledge on ATL, and assess their attitude. Therefore, the study will contribute in promoting effective use of ATL at every point of lesson preparation and teaching with purpose to improving education for better learning in the HTIs.

Literature review

Introduction

This chapter presents the review of literature related to Active teaching and learning from previous researchers. Literature was reviewed under the Knowledge and Attitude of tutors on ATL approaches. This literature has been obtained by searching from different sources like; journal articles, books and edited books.

Knowledge of tutors' on active teaching and learning approaches

According to Stewart, Mayers & Culley,(2009), tutors' knowledge on active teaching and learning approaches from an innovation point of view, changes the pace of the classroom, and are on creative way to increase students' involvement, motivation, excitement, attention and perceived helpfulness and applicability of the class. Bonwell, (2009), in his research adds that from a cognitive perspective, experientially taught students may engage in higher-order thinking such as analysis, synthesis, and evaluation. They are also able to identify the concept in the real world, manipulate phenomena for their own purposes, think about the material in new and complex ways, comprehend phenomena conceptually and recall, retain and memorize the material better, (Donovan, 2009).

Eison, (2010), asserts that knowledge on active teaching and learning equips teachers with a vast arsenal of active teaching and learning techniques at their disposal, perhaps without even being aware of them. For example:- asking questions, structured activities, journaling, small group discussions, quizzes, interactive lecture cues, videos, humorous stories, taking field trips and games to get students involved and active in the learning process. Reflecting on this it shows that the teachers are having knowledge of ATL only that they are not well aware.

Similarly Nickerson, (2007), in a research conducted on teacher's content knowledge drew a conclusion that teachers with higher content knowledge and pedagogical knowledge might be more likely to think at a deeper level about the conceptual aspects of a learner's comprehension difficulties.

Attitude of tutors' towards active teaching and learning approaches

Fuller, (2010), in his argument supports the fact that ATL approaches do aid in increasing learning as in-class activities lead to higher overall scores.

Jim (2010), in his research on using Active Learning Instructional Strategies to create

excitement and enhance learning, found out that, the major concerns that affect tutor's attitude towards use of ATL approaches are; the approaches are time consuming during the preparation of the lesson and in classroom in that the tutor cannot cover as much content in the time available. However, some instructors consider active teaching and learning approaches to be time consuming, labor intensive and applicable to small numbers of students. This has made some instructors develop negative attitude towards such approaches.

Most instructors think of themselves as being good lecturers and therefore see no reason to change from lecture method to ATL Heppner, (2007). And lack of materials or equipment needed to support active teaching and learning could be a barrier to the use of some ATL approaches (Jim et al, 2010). The attitude of participants in active teaching and learning approaches is greatly influenced by the tutor's positive attitude and the fact that, the approaches are tools which propel student centred learning (Driscoll, 2010).

Summary

In conclusion, the chapter has provided an insight on the review of literature in accordance with the study objectives. The need for health training institutions to improve on their teaching and learning approaches, by placing the students at the center of the teaching and learning process through focusing on student's needs, abilities, background and interests with teacher serving primarily as a guide and facilitator for learning; The literature has revealed that teaching effectiveness is vast; therefore, some tutors have the knowledge on what is supposed to be done as far as ATL is concerned, that is; methods and approaches used like; group discussions. However their attitude is still negative as they pointed out many reasons of note using ATL like, it is time wasting. Furthermore, ATL requires enough content and pedagogical knowledge as well as determination of tutors to put in practice all the ATL strategies in order to attain student centered learning. Therefore, in answering the study objectives, comparative analysis of the study findings with the reviewed literature will be carried out.

Methodology

Introduction

This chapter presents the methods which were used for data collection process. It addresses the following areas: the study design, research area, study population and sample size determination, inclusion criteria, sampling method, study variables and procedure, ethical considerations, data analysis.

Study design

The study used descriptive, and cross sectional research designs. The research designs were used because the research was both qualitative and quantitative in nature. Descriptive research design addressed objective two and analyzed data on the attitudes of the tutors on ATL. While objective one, the researcher employed cross-sectional research design and analyzed the tutors knowledge of ATL.

The study was qualitative because, it is a process that enabled the researcher elicits information from the selected population, described and documented aspects of the situation as they occurred in the population. Participants filled survey questionnaire (appendix II) as well.

The research design is preferred because it is economical, time saving. Appropriate statistical techniques and simple quantitative tools like frequencies, and percentages with the help of SPSS were used.

Study area

The study was conducted in four of the health training institution in Kampala District regardless of their founding bodies. Three of the institutions were private not for profit training institutions (PNFP), and one was a private for profit institution (PFP). These Health training institutions each is composed of three schools in one that is: Nursing school, Midwifery school and Laboratory technology school. The reason for choosing these Institutions was that they had a large staff that would provide opportunity to get required number of participants for the study and they were fairly near and accessible.

Study population

Population is the complete collection of all the elements that are of interest in a particular investigation, (Efuetngu, 2005). The study targeted the 4 Principals and 12 Principal tutors, 24 Tutors of whom 8 are Nurse tutors, 8 Laboratory tutors and 8 midwifery tutors and then 5 Clinical instructors. That made up a target population of 45 tutors. These were chosen for the study because they are directly charged with teaching and learning process addressing the issue of ATL in HTI.

Inclusion

Respondents had to be part of the HTI that is; Principles, Principal tutors, Tutors and Clinical instructors of the training institutions under study. The selected respondents were supposed to be present during the period when the study was conducted at the institution. The respondents had to consent to their participation in the study.

Exclusion criteria

Those who were not part of the HTI that is; Principles, Principal tutors, Tutors and Clinical instructors, but of other training institutions not under study were not considered as part of the study even if they were present at the time of data collection. The respondents who had been selected but were not around during the period when the study was conducted were eliminated. The respondents who did not consent to their participation in the study were also excluded.

Sample and sampling procedures

Sample size

According to Hill, 1998) rule of thumb, a sample size of 30-500 is appropriate for most studies. However, to be more specific, the researcher adopted Krejcie & Morgan,(1970) simplified in Sekaran, (2000), and selected a sample size of 40 respondents from a total population of 45 tutors to participate in the study. (Appendix III). The researcher, choose to use Krejcie and Morgan because of its simplified form.

Sampling techniques

The study employed random, purposive, and convenience sampling technique.
Study Variables
Independent Variables: According to this study, independent variables included: age sex, qualification, working experience.
Dependent variable: In this study the dependent variables included: knowledge, and Attitude.

Research Instruments

The study used self-administered questionnaires
The instrument used contained closed-ended questions and structured questions, according to the study objectives and research questions and with Likert Scale type questions.

Data collection methods

Having selected the informants purposefully, they filled questionnaires that were distributed to them, and this was designed to capture desired information in relation to study objectives.

Data collection procedure

After obtaining permission, the researcher identified the principals, principal tutors, tutors and clinical instructors, according to the study population as well as focusing on their respective specialties. The researcher obtained the respondents consent, assured them confidentiality, and finally distributed the questionnaire to the respondents. The respondents were given two to three days to ensure that the questionnaires are fully filled, then collected from them by the researcher.

Quality control methods

Reliability

If the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. The instrument was pre-tested in other schools that are not included in the study with similar population characteristics.

Validity

The validity of the questionnaire was tested using the Content Validity Index (CVI) (Amin, 2005; Odiya, 2009). The researcher used CVI which is a scale developed by computing or rating the relevant items in the instrument or questionnaire by checking their clarity.

Data management and processing

Data management, after collecting data, the researcher checked the information for relevancy and accuracy before leaving the study areas. Therefore, the researcher got only the useful data depending on the research items of the study.

Data analysis

Data was analyzed manually and by use of computer, Quantitative data was analyzed by use of SPSS soft ware while Qualitative data was analyzed manually using analytical approach including

tallying of responses, summarizing and expressing it in percentages by the researcher and results presented in tables and figures.

Ethical considerations

The participants' names were not used except code numbers.

All the participants' voluntarily consented to participation in the study. For confidentiality, the data and materials were kept under key and lock.

Ethical issues that arose were; anxiety and discomfort because most teachers felt it was a supervision exercise and majority of them were scared because they were not using ATL supported lessons. To mitigate these issues tutors had assurance that participation was voluntary, safe and flexible as they were free to withdraw from the study at any stage.

Dissemination of study results

Research report of this study shall be submitted to Health Tutors College- Mulago (HTC), to the schools which were studied and finally to the Ministry of education and sport.

Results and discussion

Introduction

This chapter presented study findings of the data according to specific study objectives and demographic data.

Therefore, the analysis was made based on the responses obtained from these groups of respondents and these were the key findings of the study.

Demographic characteristics of respondents

The demographic information of participants in terms of sex, age and Qualification is illustrated in Table 1.

Table 1. Summary of demographic characteristics of respondents

Variable	Responses	Frequency= 40	Percentage
Age	21-30	21	52.5
	31-40	13	32.5
	41-50	5	12.5
	51+	1	2.5
Sex	Male	23	57.5
	Female	17	42.5
Years of service	1-5yrs	30	75.0
	6-10yrs	7	17.5
	11-15yrs	3	7.5
Specialization	Nursing	15	37.5
	Midwifery	14	35
	Laboratory technology	11	27.5
Subject	Microbiology	3	7.5
	Clinical teaching (practical)	4	10.0
	Anatomy	3	7.5
	Hematology	4	10.0
	Blood transfusion	4	10.0
	Obstetrics & Gynecology	10	25

	Fundamentals of nursing	12	30.0
Qualification	Trained tutors at Diploma level	22	55
	Clinical instructor	5	12.5
	Trained tutors at degree level	13	32.5

In table 1; 57.5 % of the respondents were male and 42.5% of them were female. Regarding age of the respondents, 52.5% of them were between 21to30years and the remaining 47.5% of respondents were above 30 years. It can be concluded that the majority of the tutors joined teaching at the right age (25years) for teaching as required by Ministry of Education and Sports. The study further revealed that, 30 (75%) out of 40 respondents had served for 1to5years, 17.5 % of them served for 6 to10years and 7.5% served for 11to 15years. The study further found that 7.5% of tutors were teaching microbiology, 10% practical, 7.5% anatomy, 10% hematology, 10% blood transfusion and 25% Obstetrics. This indicates that there is relative equal number of tutors who were taken from four schools. This was due to the fact that the total numbers of tutors in the four schools were almost equal.

Tutors' knowledge about active teaching and learning

The results of tutors' responses on ATL definition are presented in Table 2.

Table 2. Tutors' and clinical instructor's understanding of active teaching and learning

Variable	Response	Trained or Non trained tutor			Total
		Trained Tutor at degree level	**Trained tutor at diploma level**	**non trained or clinical instructor**	
Active teaching and learning is the process of engaging students in active learning					
	True	12	20	2	34
	False	1	2	3	6
Total		**13**	**22**	**5**	**40**

In Table 2; 34(85%) respondents had clear understanding of the meaning of ATL. The study also revealed that 1(2.5%) trained tutor at degree level was not conversant with the definition of ATL, followed by 2(5%) trained tutor at diploma level, and 3(7.5%) non- trained or clinical instructor. Therefore, from the responses, one can deduce that trained tutors seem to have a clear knowledge on ATL.

Table 3. Trained and non trained tutors responses on the advantages of ATL to students

Variable	Different advantages given by the respondents	Responses of Trained or non trained			Total and percentage
		Trained tutor at degree level	**Trained tutor at diploma level**	**Non trained or clinical instructor**	
Advantages of active teaching & learning to students	Summarises the concepts taught	1	5	0	6 (15%)
	Gives ability to ask questions	6	5	0	11(27.5%)
	Allows interactions with others	7	3	0	10 (25%)
	Encourages students to repeat	4	1	4	9 (22.5%)

	demonstration				
	Encourages students to make research	2	1	1	4 (10%)
Total		**20**	**15**	**5**	**40**

Table 3; It was clearly revealed that the tutors at degree level gave more responses about advantages of ATL to students (20), followed by tutors at diploma level with (15) responses about different advantages of ATL to students. However, the clinical instructors gave only (5) advantages of ATL to students. This confirm that trained tutors were knowledgeable compared to non- trained (clinical instructors). The discrepancy in knowledge may be due to Lack of training in teaching methods or pedagogy. This is supported by Esse, (2013) who found that 59 trained tutors studied in Nigeria were well knowledgeable about the benefits of ATL to their students and were implementing it than non- trained.

Table 4. Trained and non trained tutors responses on the advantages of ATL to tutor

Variable	Different advantages Given by the respondents	Responses of trained or non trained			Total & percentages
		Trained Tutor at degree level	**Trained tutor at diploma level**	**non trained or clinical instructor**	
Advantages of active teaching & learning to tutor	Allows interaction with learners	4	2	3	9 (22.5%)
	Helps to get immediate feed back	9	3	0	12(30%)
	Helps to know students weakness and strength	2	2	0	4 (10%)
	Teacher becomes a facilitator	4	4	1	9 (22.5%)
	Simplifies work	4	2	0	6 (15%)
Total		**23**	**12**	**4**	**40**

Table 4; the tutors at degree level gave more responses about the advantages of ATL to tutors (23), followed by tutors at diploma level with (12) responses about the different advantages of ATL to tutors. However, the clinical instructors gave only (4) responses about the advantages of ATL to tutors. This gives an insight that, the trained tutors are knowledgeable as far as ATL is concerned. The finding of this study is supported by Bagman, (2009) who found that 70% trained tutors in Kenya were well knowledgeable about the advantages of ATL to tutors than 30% clinical instructors.

Tutors' attitude towards active teaching and learning

The results of tutors' responses to the attitude items were analyzed and presented in Table 5.

Table 5. Tutor's and Clinical instructors' attitude on active teaching and learning

Variable		Trained or Non trained tutor N= 40			Total
		Trained tutor at degree level	Trained tutor at diploma level	Non trained or clinical instructor	
Preferred method of teaching. Lecture method		7	20	5	32
Student cantered method		6	2	0	8
ATL improves students engagement in learning	Yes	12	19	1	32
	No	1	3	4	8
Can you use your own materials to promote ATL	Yes	7	5	1	13
	No	6	17	4	27
A you able to sensitize other tutors about ATL	Yes	13	20	1	34
	No	0	2	4	6

The tutors' and clinical instructors' attitude in regard to ATL, were analyzed basing on four items. To this effect, the data in the table 5 indicate that clinical instructors had less positive attitude towards ATL than tutors. In the same table, 80% of the respondents believed that ATL improves students learning. Moreover, 34 (85%) of the respondents believed they can sensitize other tutors about ATL. The table also reveals that a large number 32(80%) of the participants are still comfortable to teach using lecture method. To summarize, the aggregate responses of the participants, the researcher found out that majority of tutors have a favorable attitude towards ATL than clinical instructors and this could be because of difference in training in medical education. This is supported by Berhanu, (2008) who reported that clinical instructors who were trained in pedagogy usually apply ATL in their school in Nigeria than those who had not got an opportunity to be trained in teaching skill.
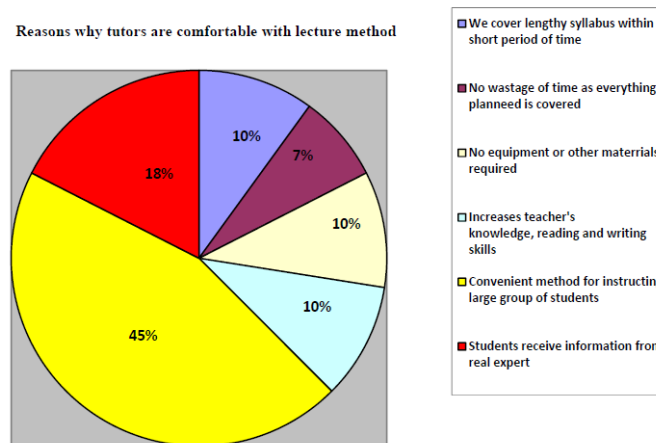

Figure 1. Reasons given for tutor's use of lecture method

Figure 1, reveals why tutors are comfortable with lecture method. The major reasons given by the respondents 44% was convenient for instructing large group of students, 18% reported that students receive information from real expert, 10% argued that they cover lengthy syllabus within short period of time, 10% said that no equipment or other materials required, and 10% said it increases teachers knowledge, reading and writing kills. This could be explained from the fact that majority of tutors were taught using lecture method and think there is no other teaching method better than lecture method. This is supported by Cannon, Kelly, Lyng & McGrath, (2009), who suggested that tutors or

instructors who are led to teach the way they were taught are believed to be unskilled in active teaching and learning theory.

Conclusion and recommendations

Introduction

In this chapter is presented the Conclusion and Recommendations of the study.

Conclusion

The analysis of the questionnaire items filled by tutors and clinical instructor indicated that, almost all of the participants seem to have good knowledge about active teaching and learning.

With regard to the attitude of tutors towards active teaching and learning, the study revealed that, though they did not practice active teaching and learning, their attitude seem to be positive. Therefore, it can be concluded that, though tutors did not implement active teaching and learning, their attitude towards active teaching and learning seem to be positive.

Recommendations

Tutors and clinical instructors need to be sensitized more on the methods, techniques and benefits of active teaching and learning through continuous professional development and workshops

Since it has been found out that tutors have a positive attitude towards use of active teaching and learning, HTIs' administrator need to motivate and encourage tutors to use ATL.

Tutors should be encouraged to improve on their lesson planning, because this will enable them address the issues like; ATL being considered as time wasting, not fit for massive numbers and many others as named in chapter four.

Limitations of the study

Some respondents were un co-operative due to misinterpretation of the study purpose. The researcher clearly explained the purpose of the study to the respondents and made clarification where necessary.

Non-responsive and biased response, where a respondent wanted to respond according to a particular characteristic or set of characteristics in relation to the outcome. The researcher boldly explained the purpose of the study to the respondents.

Loss or misplacement of questionnaires by respondents; some respondents misplaced the questionnaire and the researcher gave them extra copies of questionnaires.

Absence of respondents; the researcher used convenience sampling technique and administered questionnaires to those tutors who were present at the time data collection

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