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Promoting Active Learning in Large Class University Teaching: Prospects and Challenges

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ABSTRACT Teaching and learning in universities should embrace latest philosophies. These philosophies have moved away from the transmission models of instruction to transformative models. This discussion paper located in the social constructivist approaches to learning argues that though the lecture method remains integral as a method of teaching in the university, it requires to be transformed through the inclusion of active learning strategies within the lecture set up. The use of active learning strategies is discussed in the context of large class teaching in the South African higher education context. The researchers conclude that active learning should be imbedded in the lecture set-up and recommend the staff development of lecturers in the university through the institutionalization of academic development programmes to assist lecturers in enhancing teaching. Lecturers without teaching qualifications are encouraged to enroll for such courses in order to be fully equipped with skills that enhance their practice.

INTRODUCTION

A historical trace of the models of teaching shows that traditionally teaching emphasized the transmission of knowledge. The transmission model draws a lot from the concept 'banking in education' (Freire 1970). The use of the transmission model is based on certain assumptions about learners. In view of the transmission model and its assumptions, Pratt (2002:3) observes that;

Many who teach from this perspective hold certain assumptions and views of adults as learners. Some tend to think of the adult learner as a 'container' that is to be filled with something (knowledge). This knowledge exists outside the learner, usually within the text or in the teacher. Teachers are to efficiently and effectively pass along (teach) a common body of knowledge and way of thinking similar to what is in the text or the teacher.

The assumption of the model of the student as an empty vessel waiting to be filled by the lecturer could be wrong as students are thinking beings who should be actively involved in the learning process. The transmission model, therefore, places the teacher highly as the master of the subject (that is, the active participant) and the students as passive objects. This is where the traditional university lecture system commonly used in undergraduate teaching is drawn from. The lecturer is taken as the expert with all the knowledge in the discipline and has to 'tell' the passive students in a lecture room. Students will often be busy writing down notes even if they may not understand what the lecturer is delivering. In some instances students may not even be afforded the chance to answer questions and may only do so when they break into smaller tutorial groups. The transmission model is a teacher-directed, well-structured and organised delivery of information which is expedient when dealing with large classes of students (Rodriguez 2008). This model is most often used in university settings as lectures. A class of over 100 students is easier to manage and teach when the lecturer stands in front of the lecture hall and dictates to students, though this model has not proven to be the most suitable in teaching for understanding. Among its weaknesses are:

- Disregarding students' prior knowledge.
- Taking students as passive recipients of knowledge.
- Inherent assumption that students do not know and have to be given knowledge.

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- Non-involvement of students in the learning process.
- Over emphasis on the indispensable role of the teacher.
- Assuming that learning is mainly dependent on the teacher
- Assuming that teaching is accomplished by telling

Fisher (2005) is quick to point out that the transmission model is not totally irrelevant in teaching and learning. It has areas where it is really important. However, teaching conceptualised and wholly based on the transmission model is really faulty.

Current trends in teaching tend to focus on the generative and transformative models (Cannon and Newble 2002). In generative models of teaching the lecturer and students work closely together. There is communication from the lecturer to the students and vice versa as well as communication between and among students. Students work to generate own information/ knowledge and become owners of the knowledge. In transformative approaches students do not just generate information but they apply generated knowledge in real life situations, they experience what they learn. Communication flows freely from lecturer- to- student, student-to-lecturer and student-to-student. The lecturer becomes a partner in the learning process. This is in line with constructivism which argues that humans generate knowledge and meaning from an interaction between their experiences and their ideas (Kim 2005). This is a shift from emphasis on banking method where the student is a passive recipient of knowledge.

The transformative model of instruction is also based on the multiple intelligences (Gardner 1999) and constructivist epistemologies (Kuhn 1999) and the lecturer's role is that of 'instructor as facilitator' and not 'instructor as transmitter' (Sockman and Sharma 2008).What is clear, here, is that the modern lecturer's role has undergone a shift. The role of the lecturer has changed in line with modern thinking in pedagogy. Cheng (2001) emphasises that the shift in the new role of the lecturer is shift from 'sage on the stage' to 'guide on the side'. The facilitatory role of the lecturer cannot be overemphasized in current pedagogical trends. Sockman and Sharma (2008) identify the following as critical features of the transformative model of instruction:

- Students are taught to be critical thinkers within their discipline.
- Students should engage in critical thought with peers
- Knowledge is relative and socially constructed
- Students dialogue with one another
- Students correct each other
- Students reflect on their own thoughts
- Students are involved in knowledge creation through multiple sources.
- Students to take ownership in knowledge construction
- Apply knowledge to real life situations

The transformative model of instruction really necessitates deep learning as the student is an active participant in the instructional process.

Theoretical Framework Premise

This discussion paper is located in the social constructivist theory of learning. According to Brader-Arajeand Jones (2002), constructivism is premised on the view that students' understanding is enhanced by allowing them to actively engage with content learnt and make meaning out of it. In the social constructivist view of knowledge, learning is constructed through interactions with others (Nakabugo et al. 2006). Nakabugo et al. (2006) further observe that a social constructivist perspective focuses on learning as sense-making rather than on the acquisition of rote knowledge that is transmitted by the teacher. Social constructivist teachers help their pupils understand that they are co-constructors of knowledge, that they can make sense of things themselves, and that they have the power to seek knowledge and to attempt to understand the world. That is to say, students develop a sense of their active role as producers, not only consumers, of knowledge (Burbules 2000). Brader-Araje and Jones (2002) further observe that while constructivism may take on different theoretical meanings with different theorists and contexts it is basically about the nature of knowing and the active role of the learner. The theory states that each learner is a unique individual with unique needs and backgrounds hence the need to understand the student's background in the way they construct knowledge. On another note, Brooks and Brooks (1993: vii) observe that;

…….. constructivism is not a theory about teaching…it is a theory about knowledge and learning…the theory defines knowledge as temporary, developmental, socially and culturally mediated, and thus, non-objective.

Of importance in the above observation is that knowledge is not absolute hence students should be free to interact with knowledge and have their own views about what they learn. Students should use their backgrounds to interpret knowledge and come up with conclusions. Education should be culturally-responsive and the curriculum, that is, content, pedagogy and assessment should be linked to students' experiences and culture in terms of their background knowledge (Lee 1992).

Willingham (2009) further observes that the constructivist theory to learning ensures that students are active and engaged in the learning process. Rather than lecturers disseminating the information to students, constructivist teaching methods allow students to construct their own knowledge and fulfill their individual learning needs and interests. Social constructivism not only acknowledges the uniqueness and complexity of the learner, but actually encourages, utilizes and rewards it as an integral part of the learning process (Wertsch 1997).The importance of student involvement in the learning process which is the hallmark of the constructivist theory cannot be overemphasized. Constructivism transforms the student from a passive recipient of information to an active participant in the learning process. Always guided by the teacher, students construct their knowledge actively rather than just mechanically ingesting knowledge from the teacher or the textbook. According to Gray (1997) the characteristics of a constructivist classroom are as follows:

- the learners are actively involved
- the environment is democratic
- the activities are interactive and student-centered
- the teacher facilitates a process of learning in which students are encouraged to be responsible and autonomous.

A constructivist lecture room is built through the appropriate use of active learning strategies. The argument for the use of active learning strategies to transform the traditional lecture method is seen in the wider scope of constructivist approaches. Planning and use of active learning strategies assist in involving students in the learning process and will go a long way in ensuring that students are not passive listeners.

Constructivism is a view of learning based on the belief that knowledge is not something that can be simply given by the teacher at the front of the room to students in their desks. Rather, knowledge is constructed by learners through an active, mental process of development; learners are the builders and creators of meaning and knowledge (Ndebele and Ndlovu 2013). Constructivism draws on the seminal developmental work of Vygotsky (1962), Piaget (1971) and Kelly (1991). Recent contributions on constructivist pedagogy continue to emphasise the social construction of knowledge and the centrality of the student in the teaching and learning process (Maphosa and Kalenga 2012; Mutekwe et al. 2013; Ndebele and Ndlovu 2013). Vygotsky (1962) gives emphasis on the social context of learning and the implications are that the teacher should create a context for learning in which students can become engaged in interesting activities that encourage and facilitate learning. In this regard, Taber (2006) emphasises that learners construct their knowledge through their interaction with the physical world, collaboratively in social settings.

Social constructivists assert that children actively construct their own knowledge through their interaction with their educators or more competent peers (Mutekwe et al. 2013). Meanwhile, Piaget (1971:27) one of the early advocates of constructivism argues that students are active knowledge producers and states that;

I think that knowledge is a matter of constant, new construction, by its interaction with reality, and that it is not pre-formed. There is a continuous creativity.

Piaget demonstrates that children's minds are not empty, but actively process any material they are exposed to by the mechanisms of accommodation and assimilation (Gregory 2004). The use of lectures where content is predetermined by the lecturer and forced down upon students is contrary to constructivist approaches to learning. Students should be given the opportunity to interact with content and form their own meaning out of it.

Twomey-Fosnot (1989) defines constructivism by reference to four principles: learning, in an important way, depends on what we already know; new ideas occur as we adapt and change

our old ideas; learning involves inventing ideas rather than mechanically accumulating facts; meaningful learning occurs through rethinking old ideas and coming to new conclusions about new ideas which conflict with our old ideas. A productive, constructivist classroom, then, consists of learner-centered active instruction. In such a classroom, the teacher provides students with experiences that allow them to hypothesize, predict, manipulate objects, pose questions, research, investigate, imagine, and invent. The teacher's role is to facilitate this process.

Constructivist teaching is based on the belief that learning occurs as learners are actively involved in a process of meaning and knowledge construction rather than passively receiving information. Constructivist teaching fosters critical thinking and creates motivated and independent learners.

Large Class Teaching in the South African Higher Education Context

Increase in access to higher education to previously disadvantaged groups has resulted in large numbers of students in most degree programmes in South African universities. This expansion of the higher education system is observed by The Higher Education in Context (2010:15) which states that:

Student numbers have nearly doubled in the past 16 years, from 473,000 in 1993 to some 799,658 in 2008, according to provisional Department of Education figures.

Lecturers have to deal with managing very large classes. This impacts negatively on the quality of instruction as lecturers often resort to the traditional lecture method (Fourie and Alta 2000). The use of teaching approaches that involve students become a real challenge to most lecturers. Cherian and Mau (2002) question the possibility of using student centred teaching techniques such as inquiry-based activities in the context of teaching a course with over 600 students. Papo (1999) notes that increased student numbers in South African universities which has been worsened by reduction in resources has resulted in large classes and challenges in the use of the traditional lecture method of instruction. Greyling (1995) even notes that in view of large classes, learning becomes less interactive and the poor lecturer-student interaction often results in student failure. Snowball and Boughey (2012) acknowledge the challenge of large class teaching and call for lecturers to be more proactive in their approaches in order to effectively handle large classes and the diversity therein. Lecturers need to develop strategies of handling large classes (Carborne1998).

Active Learning

According to Geoff (2004), active learning is explained as a planned series of actions or events to invite the participant to process, apply, interact and share experiences as part of the educational process. This means that in active learning in the lecture set-up the lecturer has to plan for activities that promote learner interaction. The interaction is at two levels; student-lecturer interaction and student-student interaction. Hativa et al. (2001) observe that one characteristic of university is having a positive rapport with students. Rapport is only made possible where students are given time to interact with the lecturer during the lecture. Active learning activities should also ensure that students engage with content taught. Active learning activities take varied forms as they entail that the participant is reading, talking, writing, describing, touching, interacting, listening and reflecting on the information and the materials presented. In the same vein, Prince 2004 explains that active learning refers to models of instruction that focus the responsibility of learning, on learners. In reinforcing the importance of active learning, Geoff (2004) argues that research shows that active learning is much better recalled, enjoyed and understood and further state that in a learning set-up what the student does is more important than what the teacher does. The issue of reflective practice becomes important in teaching (Kane et al. 2004; Brookfield 1995). Similarly in the context of lectures the lecturer has to involve the students in an attempt to displace the lecture method of instruction (Maphosa and Kalenga 2012). Active learning means developing and implementing planned activities to engage the participant as a partner in the activity and promotes problem solving, critical thinking, manipulation of materials, analysis, synthesis and evaluation of the information. Active learning focuses on the desired outcome for the participant as a result of the learning activity.

Positive Characteristics of Adult Learners

Effective teaching at university level requires a thorough understanding of the nature of adult learners. Such an understanding assists the university teacher to prepare for work and deliver it well in line with the needs of adult learners. The use of active learning strategies should also be understood against the background of how adult learners learn. One characteristic of adult learners is that they learn best when the information presented is contextual and relevant. Through the use of different active learning strategies, content is presented in context and made more real and meaningful to the students. Questioning or asking students to reflect on what has been taught allows students to engage with content and understand it better.

Adults have also accumulated life experiences and come to courses with experiences and knowledge in diverse areas (Cranton 2000). Lecturers should not treat such students as empty vessels who require the lecturer to provide with all the knowledge. There is need to tap on the learners' prior and background knowledge as well as their experiences. Students' experiences and prior knowledge allows the lecturer to teach from the known to the known and from the simple to the complex. Meaningful learning starts with what students already know. Pre-learning active learning strategies such as introductory-think-pair share enable the lecturer to identify what students already know and build the lecture from such a point.

Adults have also established opinions, values and beliefs which have been built up over time and arrived at following experience of families, relationships, work, community, politics and other areas (Caffarella and Barnett 1994). Such students should be given the time to talk to exchange ideas and their views should be respected. At some point in the lecture, the lecturer may pose a question that allows students to express their views freely. This allows students to connect what has been learnt with their experiences, opinions, values and beliefs. Such a connection makes learning more meaningful and buttresses understanding. If there is a disconnection between what students are learning and their own opinions, values and beliefs then learning becomes problematic.

The observation that adults learn best in a democratic, participatory and collaborative environment underlines the need to involve such students in the learning process by allowing them to interact amongst themselves and with the lecturers (Ramsden 2003). The learning environment should not be tense as a result of strict lecturer control. It should be free and permissive as free expression empowers them to think critically and contribute more positively to learning (Niemi 2002).

As Vella (2011) and Jovita (2003) note adults also want to be able to apply new information and skills immediately. This is an important characteristic of adult learners which should be harnessed in ensuring that varied active learning strategies that allow them to apply what is learnt during the course of the lecture. Adults need to be actively involved in determining how and what they will learn, and they need active, not passive, learning experiences. These views cannot be dismissed and must be respected.

Another characteristic of adult learners which should be utilized in ensuring active learning is that they are practical and problem-solvers implying that their learning should be activity-based (Cranton 1992). During the lecture they need to be engaged in tasks that allow them to work practically and solve problems. Real learning is one that allows students to apply knowledge and skills learn in the solving of actual problems.

Benefits of Active Learning

There are numerous benefits of active learning as opposed to lecturer-centred learning in which students are passive. Active learning provides opportunities for higher order thinking as opposed to passive listening (Cherney 2008). When students are provided with opportunities to reflect on what they are learning and talk about it they are compelled to think through issues. Such higher order thinking is necessary to interrogate issues and they cease to take things at face value. Such thinking allows students to exercise value judgment by way of criticising and appreciating issues depending on facts.

Active learning also reinforces listening to others and gives opportunity for immediate feedback and adjustment of thought. This is possible in instances where students have to work with others as they are provided the opportunity to express their opinions as well as listen to the opinions of others. In the process students

may correct their viewpoints which may be faulty. Such an approach is different from cramming knowledge provided by the lecturer but ensures that students listen to the lecturer and to other students in order to understand what they are learning (Kember 1996).

The use of active learning activities within the lecture context also promotes greater student-lecturer and student-student interaction. Effective learning entails enhanced student lecturer and student-student interaction. Student-lecturer interaction enables the lecturer to establish the extent to which students are following the lecture whilst student-student interaction provides the opportunity for vital exchange of ideas. The learning environment becomes one full of excitement as students and the lecturer assume participation in the learning process. Kember and Kam-Por (2000) observe that it is lecturers' conceptualisation of good teaching that determines the approaches they choose. In this regard, lecturers need to know that teaching is all about facilitation of learning hence the need for student-centred approaches.

Learning can only be deemed effective if students are able to retain what they learn. Use of active learning strategies increases student retention. Instead of overloading students with information from the lecturer, students may be exposed to few issues and concepts which they understand and actively interact with. Learning by doing and participation enhances understanding. Edlich (1998) observes that the lecture method of teaching's main limitation is its lack of interaction with students and this limitation is addressed by active learning strategies that enable students to process information and enhance their understanding.

Effectively planned and selected active learning strategies allow students to connect the content to real life. As long as content taught is divorced from students' real life experiences it will cease to be meaningful. Hence the importance of always teaching from the known to the unknown (Biggs 1999). Biggs (1999) actually states that meaningful learning occurs when students build on what they know. Through activities done in the lecture students may provide examples of issues being handled in the lecture and content handled become more relevant.

Involvement of students in activities during lectures helps in building their self-esteem. Their ability to contribute meaningfully in discussions and this enhances the positive concept of self. Once students develop a positive self-esteem and perceive themselves as able, it will assist them to perform better. This is contrary to instances where they are not sure of themselves. In as much as students develop their own self esteem through participation on activities they also learn to work with and accept others. The essence of working with others also culminates in a great sense of belonging in class. This is all important in ensuring that students participate fully in the learning process by understanding and appreciating their peers. In buttressing the importance of activity in learning, Biggs (1999:74) states that;

Being active while learning is better than being inactive: activity is a good in itself.

The importance of making use of active learning strategies that ensure that students are active learners can, therefore, not be overemphasized.

Active Learning Strategies

Think-Pair Share

According to Robertson (2006), in the think-pair-share activity, students work in pairs up to share ideas on a problem or question given by the lecturer. The way students work in pairs allows them to exchange ideas and this ensures their participation in the lecture .Such an activity is also useful in ensuring that the lecture contains students' discussion and the sharing of opinions and ideas. Use of the think-pair-share is possible in any seating arrangement as students do not necessarily have to move from their seats. The think-pair-share activity kills the monotony of question and answer in which the lecturer asks questions and allows individual students to answer. Students are given the opportunity to talk to one another, share ideas and in response to the question. Students are given a relatively short period of time to think and then share their thoughts in pairs. After sharing ideas in pairs, students are further asked to share their ideas with the whole class. Another version of the think-pair share strategy is the introductory-think-pair-share activity that can be used at the very beginning of the lecture. Students are asked to think and discuss in pairs about the day's lecture. This allows the lecturer to develop the lecture from what the students already

know. Biggs (1999) contends that teaching from the known to the unknown fosters students' understanding.

"Turn-To-Your-Neighbour" Approach

This is an activity almost similar to the think-pair-share activity. In this strategy, the lecturer allows the students to turn to the student next to them and discuss a question. Then randomly call on student pairs to provide the answer. Liebman (1996) observes that while some students learn better by listening, there are some students whose learning is enhanced by active involvement in learning hence the need to always involve them actively in one way or another in the learning process. One simple way of ensuring student involvement is the constant use of "turn-to-your-neighbor" discussions throughout the lecture. The question and answer method is also transformed as students talk to their partners first before responding to the given question. In a Sociology of Education lecture on cultural capital and student achievement in school, the lecturer may simply say; "Turn to your neighbour and exchange ideas on how unfair students' competition is in the school system in this country." This allows students to interrogate issues in line with the day's lecture by giving their own view points.

'I Have A Question' Activity

In this activity, at the conclusion of a lecture the students are asked to write down at least one open-ended question. Such a question should avoid the 'yes or no' type of responses and the questions should be drawn from the lecture content. Such an activity allows the students to interact with the lecturer and with each other and assists in reinforcing learning and encourages students to see different aspects of an issue or concern. Such an activity enables students to be actively engaged in the learning process (Porter and Stanley 2007; Wingert 2007).

Clearest/Muddiest Point

Towards the end of the lecture each student is asked to write down the clearest point or the unclear point about the lecture. Students may be asked to share their points and react to them. In case of unclear points, the lecturer is able to judge on issues that students failed to grapple with and plan accordingly for future lectures. Students may also be asked to explain the unclear points of others in an attempt to make them clear. One student's unclear point may have been well understood by others. This is in line with Murray and Macdonald's (1997) observation that once lecturers' conceptualisation of teaching is based on facilitation of learning, their teaching approaches will certainly ensure facilitation and such activities come in handy to ensure students interact with the content taught by way of reflecting on it.

Focussed Listing

The lecturer may want students to think through an issue instead of simply providing them with answers. Focussed listing allows students to write down ideas of what they know on the given topic and this forms the basis of the lecturer's further development of the lecture moving from what students already know. In a nursing lecture on nursing as a profession, the lecturer may ask students to list on paper as many characteristics of a good nurse as they can. The listing is done on a properly defined issue to ensure that students' thinking is harnessed towards a particular issue. Report backs on the list should be made so that the lecturer identifies and highlights critical ideas related to the day's lecture.

Question and Answer

Questioning is premised on the Socratic approach to teaching in which the teacher asks questions to elicit responses from students. Such questions assist students in enlightening them on the concepts taught. The Socratic approach entails the use of well-crafted probing questions that allow students to realise the truth through the way they respond to questions. The Foundation for Critical Thinking (2011:1) states that;

Feeding students endless content to remember (that is, declarative sentences or "facts" to remember) is akin to repeatedly stepping on the brakes in a vehicle that is, unfortunately, already at rest. Instead, students need questions to turn on their intellectual engines and they must themselves generate questions from our questions to get their thinking to go somewhere…

It becomes clear that questions employed by the lecturer should be important in engaging students in thinking hence the lecturer should vary these questions from lower order to higher order ones. This will enable the lecturer to make use of not only questions that simply require students to reproduce information but also questions that assist in developing critical thinkers.

One Minute/Two Minute Paper

One important feature of effective teaching approaches is reinforcing what students would have learnt. Use of a one minute or two minute paper allows students to summarize the key issues of the lecture. Once students are aware that their lecturer may engage them in such an exercise they are forced to be attentive during lectures. As students present their short papers it also helps others to catch up on issues they may have missed out. So towards the end of a lecture the lecturer may simply say; "Write down four important issues we dealt with in today's lecture" and then ask for a few randomly selected students to report back.

Note Check

A note check exercise gives the students the opportunity to compare notes with a partner (Cross and Angelo 1988). Such an exercise may take very few minutes and its purpose is to ensure that when students take notes they listen carefully and accurately write them down. Any problems with their own notes are corrected as they compare their notes with others. The approach also helps to summarise vital information in the lecture as well as identifying and clarifying unclear points.

Brainstorming

In brainstorming, students are asked to generate thoughts about the topic. This links what the students already know with what they will learn. This is in line with Biggs (1999) that meaningful learning takes place when students can link new concepts to what they already know. In a Geography lecture where the lecturer plans to teach on factors affecting the location of an industry, students may be asked to discuss and bring out ideas on what makes an industry viable if located in a particular place. All the ideas students raise prepare them for the new concepts that they will later learn. This will enable them to link ideas and identify new concepts from what they already know. This works better than the expository type of teaching where the lecturer simply 'pours' out knowledge onto students who are assumed to be blank (Freire 1970). Utilising on what students know to further introduce new concepts is an effective way of teaching. Kujawa and Huske (1995) claim that prior knowledge acts as a lens through which we view and absorb new information.

Concept Mapping

Biggs (1999:82) states that concept maps are designed to 'present a structure and find out how students see the structure'. This further entails students identifying relationships between ideas and how they all relate to the stated main idea often represented by a number of shapes centered around a 'Main Idea' (Romance and Vitale 1999). In a nursing lecture on making a diagnosis on patients, students may be asked to concept, that is, map all the steps that a nurse takes until a proper diagnosis is made. Students are practically involved in identifying and writing down all the steps required for proper diagnosis to be made. Such an exercise may be used to summarise what students would have learnt and will assist in enhancing their understanding.

Challenges in the Use of Active Learning Strategies

There are several challenges academics may face in the use of active learning, particularly when dealing with large classes. In using active challenges academics fear to lose control over the class. It is important that the lecturer is in control so as to ensure that all what is planned is covered. Some active learning strategies may sway the lecturer and key issues on content may be left uncovered. Tied to the challenge of loss of control is the time factor. Teaching is timetabled strictly and content has to be covered in the given time. This may leave the lecturer with no time to involve students in the lectures. However, despite these challenges it is still necessary for lecturers to find time and opportunities within the lecture to involve students as passive listening is not beneficial in the teaching and learning process.

Lecturers may often be scared of trying new ways of teaching hence resorting to the traditional lecturer-centred lecture system. Such fear could simply be fear of the unknown. Lecturers should really be innovative and be willing to try out new teaching strategies in an attempt to enhance their teaching. Lecturers' use of traditional approaches may simply be done in order to cover course content. However there is need to balance between content coverage and ensuring that students' understanding of the content covered is enhanced.

Use of active learning strategies is also demanding in terms of planning for such activities and providing the requisite resource materials. It requires a lecturer with thorough grounding in teaching methodologies in order to come up with the necessary active learning activities, implement and manage them well in large class teaching. Lecturers, without teaching backgrounds may find it difficult to ensure that active learning strategies are incorporated in their teaching.

Hart et al. (2000) contend that one challenge of incorporating active learning strategies results from lecturers' desire to dominate the teaching and learning environment. Lecturers often want to be seen by their students as very knowledgeable. Such a desire will always see lecturers' domination in the lectures with students reduced to passive listeners or observers of the lecturer's teaching show. Lack of training in pedagogy and andragogy is often the problem. Lecturers should have a clear understanding of what learning entails as well as how adult learners learn. University of South Africa (2008:1), for example, defines learning as 'an active process of construction of knowledge, attitudes and values as well as developing skills using a variety of resources including people, printed material, electronic media, experiential and work-integrated learning, practical training, reflection, research, etc.' This shows a broad understanding of learning which lecturers should have other than simply and wrongly viewing it as transmission of knowledge to students. Smith (2011) states unequivocally that teaching that results in learners merely reproducing knowledge is faulty. Hence the importance of professional development courses for lecturers in universities.

The pressure of students evaluations on lecturers hinged on students expectation is also a challenge in the transformation of the lecture system. Qualters (2001) contends that lecturers who involve students in lectures are often rated lowly in evaluation as students are used to lecturers who deliver the content while students listen and take down notes. The low rating of lecturers who involve students in active learning strategies may also be further worsened by students' resistance of active and active learning techniques owing to a culture of being used to being lectured to.

Use of Technology to Enhance Active Learning

Yourstone et al. (2008) explored the use of digital learning technologies in enhancing learning and found that the use of clickers for immediate response to questioning in a lecture setup ultimately results in improved test scores. This shows that in dealing with large classes and ensuring active learning, digital learning technologies can come in handy to improve teaching and learning and student attainment. The findings of this research provide evidence that the use of immediate feedback using a technology such as clickers can have a positive impact on student learning as measured by test scores. Martyn (2007) contends that clickers ensure that students participate anonymously. Such an approach is multi-cultural and multi-lingual classes where students who do not have a good command of the language of instruction may not be comfortable in participating in class. With guaranteed anonymity such students will be motivated to participate freely. Cox (2011) contends that digital learning technologies are very vital in ensuring that students' interactions with content and with the lecturer is enhanced and should be fully utilized.

CONCLUSION

The lecture method of instruction requires transformation from the traditional thrust where the lecturer was the dominant and all-knowing figure in the lecture room with students viewed as passive listeners. The incorporation of active learning strategies becomes imperative in the transformation of the lecture method of instruction. Such active learning instruction should be planned and dawn on the lecturers' understanding of how adult learners learn. Learning should be active and cooperative in line with social constructivist approaches to learning. The building

of a community of scholars in students is of importance. Such students should not only be able to work together but also to construct their own meaning from content taught as active agents in the learning process. Where possible, appropriate use of digital learning technologies should be embraced to enhance students' participation in lectures.

RECOMMENDATIONS

This presentation is hinged on ensuring excellence in teaching and learning by way of transforming the lecture method of instruction. Such transformation is only possible if lecturers are aware of what constitutes proper learning and have an adequate understanding of how adult learners learn. Armed with skills and expertise in pedagogy and andragogy, lectures will be in a position to incorporate active learning techniques in their teaching. The model below is proposed to ensure that lecturers plan and implement necessary active learning activities in the lecture method of instruction.

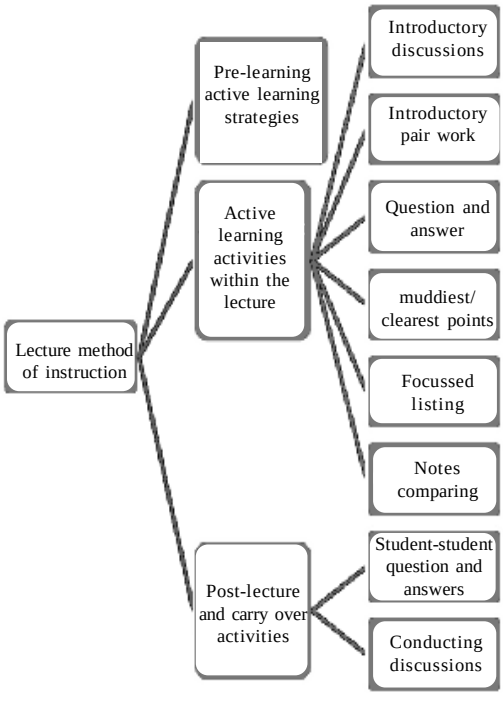

Fig. 1. Proposed model for transforming the lecture method

Model for Transforming the Lecture Method

The researchers propose a model that could be utilized in transforming the lecture method to encompass active learning activities.

The proposed model of transforming the lecture method as shown in Figure 1 is that promoting active learning is a deliberate plan for the use of active learning activities at different stages of the lecture. A lecturer has to plan for pre-learning activities, activities within the lecture and post lecture and carry over activities. Such planning makes sure that active learning activities are carefully chosen and applied at specific times during the lecture. The activities themselves should be clearly spelt out as to what students will do. The use of active learning activities, therefore, calls for prior planning as well as expert execution in the lecture against the demands of time, number of students as well as space constraints. This will ensure that the lecture is not just lecturer 'talk show' but comprises of a lot of student involvement in line with social constructivist pedagogical thinking.

The following recommendations are also made to ensure that active learning strategies are incorporated in lectures;

a) Professional development courses should be integral in the universities to ensure that lecturers are assisted with programmes designed to upgrade their teaching.
b) Lecturers without teaching qualifications should be encouraged to undergo training to acquire such qualifications.
c) Staff exchange programs across departments, faculties and universities should be encouraged to share experiences and expertise in teaching and learning issues.
d) Academics should be encouraged to research into teaching and learning issues as well as the trying out of innovative ways of teaching.
e) When planning for lectures, lecturers should always plan for ways in which students would participate in the lectures other than merely listening and taking down notes.

REFERENCES

Biggs J 1999. *Teaching for Quality at University*. Philadelphia: Open University Press

Brader-Araje L, Jones MG 2002. The Impact of Constructivism on Education: Language, Discourse, and Meaning. American Communication Journal, 5(3). From <http://www.acjournal.org/holdings/vol5/iss3/special/jones.htm.> (Retrieved 15 May 2012).

Brookfield S 1995. *Becoming a Critically Reflective Teacher*. San Francisco: Jossey-Bass.

Brooks J, Brooks M 1993. *The Case for the Constructivist Classrooms*. Alexandria, VA: ASCD.

Burbules NC 2000. Constructivism: Moving beyond the impasse. In: DC Phillips (Ed.): *Constructivism in Education*. Chicago: University of Chicago Press, pp. 308-330

Caffarella RS, Barnett BG 1994.Characteristics of adult learners and foundations of experiential learning. *New Directions for Adult and Continuing Education* 62: 29-42

Cannon R, Newble D 2002. *A Handbook for Teachers in Universities and Colleges: A Guide to Improving Teaching Methods*. London: Kogan Page Ltd

Carborne E 1998. *Teaching Large Classes: Tools and Strategies*. Thousand Oaks, CA: Sage Publications.

Cherian M, Mau R 2002.*Teaching Large Classes: Usable Practices from Around the World*. Singapore: McGraw-Hill Education.

Cherney I 2008.The effects of active learning on students' memories for course content. *Active Learning in Higher Education*, 9(1): 152-171.

Cox JR 2011 Enhancing student interactions with the instructor and content using pen-based technology, Youtube videos, and virtual conferencing. *Biochemistry and Molecular Biology Education*, 39(1): 4 – 9.

Cranton P 1992. *Working with Adult Learners*. Middletown: Wall and Emerson.

Cranton P 2000.*Planning Instruction for Adult Learners*. Toronto: Wall & Emerson.

Cross KP, Angelo TA 1988.*Classroom Assessment Techniques: A Handbook for Faculty* Michigan: The University of Michigan, National Center for Research to Improve postsecondary Teaching and Learning.

Fisher R 2005.*Teaching Children to Think*. Cheltenham: Nelson Thornes.

Foundation for Critical Thinking 2011. From <http://www.criticalthinking.org/pages/the-role-of-socratic-questioning-in-thinking-teaching-learning/522.> (Retrieved 10 June 2012).

Fourie M, Alta H 2000. Challenges to sustaining and enhancing quality of teaching and learning in South African Universities. *Quality in Higher Education*, 6(2): 115-124.

Freire P 1970. *Pedagogy of the Oppressed*. New York: Herder and Herder.

Gardner H 1999.*Intelligence Reframed. Multiple intelligences for the 21st Century*. New York: Basic Books

Geoff P 2004. Active Learning. From <http://www.geoffpretty.com/activelearning.hmtl> (Retrieved 15 May 2012).

Gray A 1997. SSTA Research Centre Report #97-07, Regina, SA: Saskatchewan School Boards Association Research Centre. From <http://www.ssta.sk.ca/research/instruction/97-07.htm> (Retrieved 15 May 2012).

Gregory RL 2004. *The Oxford Companion to the Mind*. Oxford: Oxford University Press.

Hart N, Waugh G, Waugh R 2000. The Role of the Lecture in University Teaching. Teaching and Educational Development Institute Conference, University of Queensland, November 9-10. From <www.tedi.uq.edu.au/conferences/teach_con-aference00/papers/hart-waugh-etal.html > (Retrieved on 2 September 2011).

Hativa N, Barak R, Simhi E 2001. Exemplary university teachers: Knowledge and beliefs regarding effective teaching dimensions and strategies. *The Journal of Higher Education* 72(6): 699-729.

JovitaMRM 2003.Adult learners in the classroom. *New Directions for Students Services*, 102: 43-52.

Kane R, Sandretto S, Heath C 2004. An investigation into excellent tertiary teaching: emphasizing reflective practice. *Higher Education*, 47: 283 – 310.

Kelly GA 1991. *The Psychology of Personal Constructs: Volume One - A Theory of Personality*. London: Routledge.

Kember D 1996. The intention to both memorise and understand: Another approach to learning? *Higher Education*, 31: 341-351.

Kember D,Kam-Por K 2000. Lecturers approaches to teaching and their relationship to conceptions of good teaching. *Instructional Science*, 28(5): 469 – 490.

Kim JS2005.The effects of a constructivist teaching approach on student academic achievement, self-concept, and learning strategies. *Asia Pacific Education Review*, 6(1): 7-19

Kuhn D 1999. A developmental model of critical thinking. *Educational Research*, 28(2): 16–26.

Kujawa S, Huske L 1995. *The Strategic Teaching and Reading Project Guide Book*. Oak Brook, IL: North Central Regional Educational Laboratory.

Lee CD 1992. Literacy, cultural diversity, and instruction. *Education and Urban Society*, 24(2): 279-291.

Liebman JS 1996. "Promoting Active Learning During Lectures," OR/MS Today, 23(6) From <http://www.lionhrtpub.com/orms/orms-12-96/education.html > (Retrieved 26 May 2012).

Maphosa C, Kalenga RC 2012. Displacing or depressing the lecture system: Towards a transformative model of instruction for the 21st century university. *The Anthropologist* 14(6): 555-563.

Martyn M 2007. Clickers in the classroom: An active learning approach. *Educause Quarterly*, 30(2): 71 – 74.

Murray K, Macdonald R 1997.The disjunction between lecturers'conceptions of teaching and their claimed practice. *Higher Education*, 33(3): 331-349.

Mutekwe E, Ndofirepi A, Maphosa C, Wadesango N, Machingambi S 2013. A SWOT analysis of the rise and pedagogical implications of the social constructivist epistemology in educational practice. *Anthropologist*, 15(1): 53-65.

Nakabugo MG, Albert B, Maani JS 2006. *Investigating Strategies for Improving Teaching and Learning in Large Classes for Basic Education Support in Uganda*. A Research Proposal developed at the A-A Dialogue. CICE, Hiroshima University.

Ndebele C, Ndlovu L 2013.Using feedback from students to remedy a pedagogy of thehistorically disadvantaged: A case study of law teaching. *Anthropologist,* 15(1): 1-11.

Niemi H 2002. Active learning – a cultural change needed in teacher education and schools. *Teacher and Teacher Education,* 18(1): 763-780.

Papo WD 1999. Large class teaching: Is it a problem to students? *College Student Journal,* 33(3): 354 – 357.

Piaget J 1971. *Science of Education and the Psychology of the Child*. London: Longman.

Porter E, Stanley C 2007. *Engaging Large Classes: Strategies and Techniques for College Faculty*. Boston, MA: Anker Publishing Company.

Pratt DD 2002. Good teaching: One size fits all? In: JovitaRoss-Gordon (Ed.): *An Up-date on Teaching Theory*. San Francisco: Jossey-Bass Publishers, (93): 5-16.

Prince M 2004. Does active learning work? A review of the research. *Journal of Engineering Education,* 93(1): 223–231.

Qualters DM 2001. Do students want to be active? *Journal of Scholarship of Learning and Teaching,* 2: 51-60.

Ramsden P 2003. *Learning to Teach in Higher Education*. London: Routledge Falmer.

Robertson K 2006. Increase Student Interaction with "Think-Pair-Shares" and "Circle Chats." From <http://www.colorincolorado.org/article/13346/> (Retrieved 10 June 2012).

Rodriguez A 2008. Toward a transformative teaching practice: Criticity, pedagogy and praxis. *The International Journal of Learning* 15(3): 345-352.

Romance NR, Vitale MR 1999. Concept mapping as a tool for learning: Broadening the framework for student-centered instruction. *College Teaching,* 47(2): 74.

Smith E 2011.Teaching critical reflection. *Teaching in Higher Education,* 16(2): 211-223.

Snowball JD, Boughey C 2012. Understanding student performance in a large class. *Innovations in Education and Teaching International,* 49(2): 195-205.

Sockman BR, Sharma P 2008. Struggling toward a transformative model of instruction: It's not so easy! *Teaching and Teacher Education,* 24(1): 1070 – 1082.

Taber KS 2006. Beyond constructivism: The progressive research programme into learning science. *Studies in Science Education,* 42: 125-184.

Twomey-Fosnot C 1989. *Enquiring Teachers, Enquiring Learners: A Constructivist Approach for Teaching*. New York: Teachers College Press.

University of South Africa 2008.*Open Distance Learning Policy*. Pretoria: UNISA.

Vella J 2001.*Taking Learning to Task Creative Strategies for Teaching Adults*. San Francisco :Jossey-Bass.

Vygotsky LS 1962.*Thought and Language*. MIT Press, Massachusetts Institute of Technology and John Wiley and Sons

Willingham D 2009.*Why Students Don't Like School: A Cognitive Scientist Answers Questions about how the Mind Works and What it Means for the Classroom*. San Francisco: Jossey Bass.

Wingert D 2007. Actively engaging large classes in the sciences. *Teaching Professor,* 21: 1-3.

Wertsch JV 1997. *Vygotsky and the Formation of the Mind*. Cambridge: Cambridge. University Press.

Yourstone SA, Kraye HS, Albaum G 2008. Classroom questioning with immediate electronic response: Do clickers improve learning. *Journal of Innovative Education,* 6(1): 75-88.

Yuretich RF, Khan SA, Leckie RM, Clement JJ 2001. Active learning methods to improve student performance and scientific interest in a large introductory oceanography course. *Journal of Geoscience Education,* 49(2): 111-119.