

7] Active Learning in Institutions of Higher Learning

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Abstract

In this era of improved technology and internet connectivity, learners in institutions of higher learning are bound to be affected both positively and negatively in terms of knowledge acquisition. For instance, on the positive aspect, they are able to interact with learning materials from all over the world and other learners within a very short period of time. Contrary to this, if the instructor does not engage the learners, he/she is bound to lose them because they drift away from the lesson and engage with peers and other activities through the use of their smart phones. Also, they may fail to attend the said lectures simply because in most cases, they are usually left out in the learning process as they do not assume an active role. Hence, this paper focuses on the use of active learning in higher learning institutions where it adopted a review of existing literature. Some fundamental elements used together with this approach include cooperative, collaborative and problem-based learning. Specifically, active learning has been defined giving relevant examples; theoretic foundation used on active learning, the importance of using active learning, active learning strategies/techniques and finally, the challenges of using active learning in institutions of higher learning. To be able to attain students learning outcomes (SLO) within the higher learning institutions, instructors (lecturers) should incorporate the use of active learning approaches which have a capability of making the learning process fruitful.

Keywords: Active learning, institutions of higher learning, strategies

Introduction

The learning environment in higher learning institutions should enable a friendly learning process. The chosen activities to be undertaken during the learning process should be valuable to the learners. Peko and Varga (2014) attest that experiences within a learning environment expand on their knowledge as they get actively involved with other learners within the classroom set up. This involvement with other learners may be termed as cooperative learning. Felder and Brent (2009) defines active learning as any course related activity that learners are asked to do besides paying attention, listening and note taking. Here, the learning environment is transformed into a different atmosphere where learners are expected to do other activities intended to promote learning. Handelsman, Miller and Pfund (2007) believe that the aspect of active learning encourages students to engage in their own learning by taking part in the learning process. This they say, that they participate in learning activities to construct new knowledge.

Bonwell and Eison (1991) in the context of a higher institution define active learning to be all that which involves students in doing things and thinking about the things they are doing. Here, as the learning process is taking place, the student is constantly in contact with the learning process which yields knowledge acquisition and at the end of the lecture, he/she would be in unison with the course instructor. As Prince (2004) posited, active learning is a method of instruction that engages learners during the learning process which requires relevant learning activities and also expects learners to critically think about their actions rather than being dormant in class. The author further postulates that learners need to be accorded opportunities that will enable them practice the skills and assess their learning within the classroom if at all they are to meet the expectations of the employees in the world of work. In this regard, Robertson (2018) urges that the awareness of the skills by instructors in the institutions of higher learning leads them to consider the use of active learning strategies. He further attests that learners should actively take part in designing their learning in their classrooms. They also need to be aware of their backgrounds and knowledge experiences where they need to attend classes when they are prepared to take part in the learning process to bring new knowledge and putting new ideas and experiences to existing knowledge and experiences that have already been discovered with an aim of enhancing a new form of understanding.

Further, Peko and Varda (2014) defines active learning as a type of learning that enables learners to possess high level autonomy and self-monitoring needed for the application of mental strategies and particular cognitive skills to be able to filter out important and less important information, make an analysis and comparison, then be able to construct new knowledge based on the previous knowledge. When such a channel is followed, the learner will be better placed in retaining the new information for a long time. If active learning is embraced other than the traditional method, learners will be motivated to attend classes as they will be able to construct knowledge themselves other than relying from the course instructor. Felder and Brent (2009) suggest that the use of active learning is meant to deter course instructors from making use of lecturing strategy but should strive to embrace the learning strategy that engage students which will be translated to high level learning.

Through active learning, certain goals are arrived at and can only be realized when the learners are able to prepare, take part in the learning process, regulate and actively take part in the learning activities (Simons, 1997). Peko and Varga (2014) reports that the nature of goals that active learning targets includes; high level of self-regulation, assorted cognitive plans, discerning information processing, building upon previous knowledge and approaching instructions critically. In this regard, active learning can translate into a meaningful learning experience that will linger in the learners' minds for a very long time. Further, Felder and Brent (2009) points out that when active learning is used, the brief break of practice and comment in class will translate into a positive outcome on the learners when they will tackle the homework and examinations in the course of learning. This will likely occur because learners are able to take part in constructing their own knowledge.

In this digital era, Jourdan, Haberland and Dies (2004) believes that there has been a move towards the student as the one who is accountable for his/her learning. Such a scenario can be possible when learners are accorded time to learn on their own in the course of teaching and learning process. Robertson (2018) further urges undergraduates to learn to build skills of self-awareness and learner capacity that will enable them to engrave their learning methods which in the long run direct the people around them to support their learning process.

Brame (2016) describes active learning as those activities done by students to construct knowledge and understanding. She further affirms that the learning activities expects learners to embrace higher order thinking that provides a link between the activity and the learning that is taking place. When the learners are able to relate the inbuilt information with the activity at hand, they are able to learn on their own.

Based on the definitions and examples given on the use of active learning, it is evident that its adoption makes the traditional lecture livelier and may have an impact of improving the class attendance. This is because learners are actively involved in the learning process.

Theoretic Foundation of Active Learning

The Kenya's Basic Education Curriculum Framework (2017) records that in constructivism theory of learning, the learner has the ability to build an individual understanding of the world on the basis of involvements and their relations and learning is a process of constructing knowledge rather than acquiring or communicating it. The constructivism learning theory as postulated by Piaget together with other proponents believe that learners have the ability to assimilate innovative information into a current context or may take an option of modifying the same context to accommodate the innovative (new) knowledge that contradicts with that of earlier knowledge.

Bransford, Brown and Cocking (1999) affirm that the constructivism learning theory accentuates that people learn through building their own knowledge, relating new ideas and experiences to existing knowledge and practices to form a new understanding. This can be made possible in institutions of higher learning when active learning strategy is used to deliver the prepared content. Further, Musanovic in Peko and Varga (2014) attests that the constructivist theory has a characteristic of transforming the relationship between the learner and the instructor into varied sources of information. Therefore, instructors in the institutions of higher learn should source for those approaches that promote learner's engagement and at the same time are cognitive in nature. When learners are placed in groups, they are able to construct knowledge into meaningful realities other than when other methods are used on their own.

Importance of using Active Learning in Institutions of Higher Learning

Through research, there is indication that the learning approach that engages learners to be lively in lectures when embraced in higher learning institutions can help learners to learn more effectively in comparison with other learning approaches. For instance, Ruiz-primo, Briggs, Iverson, Talbot and Shepherd (2011) established that through active learning, students learning outcome was greatly improved as the learners were able to grasp the content to a higher degree. Further, Ambrose et al (2010) confirmed that there are tremendous benefits that can be realized in different disciplines through active learning approach. In this case, it is believed that the active learning can be used in nearly all the courses within the institutions of higher learning that cannot fail to boost the learning process for all the students making the learning environment a more inclusive one (Brame, 2016). In addition to this factor, Haak, Hille Rislambers, Pitre and Freeman (2011) established that the amalgamation of active learning into the Biology course profited all the students in that class and also, Lorenzo, Crouch and Mazur (2006) conveyed an improvement where the greatest came from the female students. This as a result led to the elimination of gender gap that had existed before.

Braxton, Milem and Sullivan (2000) noted some benefits of active learning. To begin with, learners that encounter active learning on a regular basis perceived themselves to acquire knowledge and understanding with a lot of ease. Further, the said learners may view their experiences in higher learning institutions to be personally rewarding, use of such a strategy accords them more time to participate on social issues as they have the ability to prepare for their courses and examinations. Finally, they acknowledged that active learning has the ability to aid learners in developing friendships and networks to support each other to establish membership in their social communities within the institutions of higher learning. Thus, use of such a learning strategy has the capability of yielding more benefits beyond the confines of the classroom. Such benefits play a critical role in enhancing the students' experiences in totality.

Peko and Varga (2014) outline more benefits of using active learning. First of all, it enables learners to act autonomously making them have a control of the learning activities. Secondly, it has the ability to be a motivating factor on the learners as it links problem-based teaching to an inbuilt desire to learn by exploration. Thirdly, it has the ability to influence the lives of the learners and is also able to create a new school experience all together. It also revealed that, there is a possibility of acquiring a positive impact on one's personality. Finally, it was attributed that it has an impact of making school life similar to that of a real life. From these tenets, the adoption of active learning in the universities and colleges will have an impact on the side of the learners as they will be at ease in knowledge acquisition as they are their own makers of knowledge.

Learners who are grounded on learning through their real world experiences and at the same time use the higher order thinking skills, they do have a chance of increasing their

engagement in the learning process (Koohang, Paliszkie, Paliszkiewicz, Goluchowski, & Nord, 2016). This enables them to own their learning as they are creators of knowledge where the course instructors may have used some of the active learning approaches. As Fayombo (2012) pin points, there is need to employ a thoughtful and scholarly approach where instructors in institutions of higher learning should use the many strategies that promote students' engagement in the learning process. Further, she reiterates that each faculty member should engage in self-reflection and explore their willingness to embrace alternative learning approaches. This study by Fayombo (2012) was able to realize the following four major findings. First, that the respondents were actively involved in the lectures when the learning strategy was employed. Secondly, video clips simulations were considered the best learning strategy as it has the ability to foster the development of communication that enhances satisfaction in the learning activity. Thirdly, that the strategy had a greater significance with the students' learning outcomes and lastly, active learning strategy was able to predict the students learning outcomes hence has the ability to achieve Students Learning Outcomes.

Morrison (2004) believes that classrooms in institutions of higher learning have a tendency of having a low level of comprehension where learners are keen to write lecture notes leaving the mind untouched. By this concept it is arguably one of the characteristics of a lecture where no active learning strategy is employed and learners are just left in an inactive state. Morrison further argues that the use of this learning strategy that involves learners has the ability of organizing what is to be learnt in the hands of the learners to carry on with the learning process. Therefore, it is against this background that there is need to engage the learners actively in higher learning institutions by moving away from content focused to student focused and be able to engage the learners in the learning process. In his concluding remarks, Robertson (2018) urged that the learners of today should embrace problem-solving and decision making and be able to look at being in the institutions of higher education as having a chance to learn how to learn and that the only process that enables them to learn is through active learning.

From the above numerous examples, it is evident that active learning has tremendous benefits and should therefore be utilized in higher learning institutions. In their concluding remarks, Felder and Brent (2009) opined that instructors who make use of active learning approach have reaped incredible benefits where the lessons become lively and the quality of learning is improved. Lessons become lively simply because the learners are actively engaged in the learning process unlike the scenarios where the course instructor takes the center stage when giving a lecture.

Active Learning Strategies/Techniques

From what we have discussed, it is clear that the use of active learning approaches in institutions of higher learning have a tendency of making lectures more meaningful. Peko and Varga (2014) acknowledge that for the strategy to be effective, the teacher has to

play a critical role in regards to how he/she views the main aim of being in a classroom. Further, they argue that students should be told what the teaching goals are, the methods to be used to attain the goals and the learning outcomes they are expected to attain at the end of the learning process. Kennedy (2006) argue that learning outcomes describe the essential knowledge, skills and attitudes that graduates of a programme will be able to demonstrate. In this context, a lot of emphasis is accorded to the learners to deal with their learning process. This as just Paulson and Faust (2010) put it to be those activities done by students while in class do other than paying attention to the lecturer.

According to an earlier monograph of Bonwell and Eison (1991), they give the description of active learning where the strategy emphasizes students to discover their own meanings. As observed, literature search on active learning strategies yields so many possible strategies that can be used. On this note, Fayombo (2012) points that there is need to adopt practices that actively engage students. According to Adams and Ray (2016), one should select activities that fit the content being taught, the learning objectives of the class, students' interest and abilities and the teaching methodologies. Thus, learners will be in a better position to construct their own knowledge.

Morrison (2004) has outlined a good number of strategies that can be adopted by instructors in the institutions of higher learning. They include among others;

- i. Think-pair-share; Learners think about the question and write down their answers after which they join with one other to discuss. This offers a good basis for wider discussion.
- ii. Buzz groups; Learners work in small groups to discuss a question that could range from what they already know, what needs to be clarified and what they want to be taught next.
- iii. Fishbowl; learners are put in groups where one group discusses a topic while the second group makes an observation of the discussion as they record contributions made by other people. Later on, they give individual feedback on key issues raised.
- iv. Role play; Learners may work in groups or in pairs or individually to act information on a specific topic in front of the class. Each group should have a time limit.
- v. Round; All learners have the opportunity in turns to make a statement pertaining the topic. It could be what they expect to learn, what they learnt in the lesson among others.
- vi. Whole to part to whole; The course instructor demonstrates a process or skill. Then, some learners try the skill and may show difficulties when carrying out the task. The instructor may then break down the process into small parts then compliments with a discussion.

When such strategies and more are utilized as part of the learning process, knowledge acquisition process will become more meaningful in institutions of higher learning. Peko

and Varga (2014) in their concluding remarks believe that the process of knowledge transfer can be made possible if students actively take part as the teachers play the role of guiding them. To be able to realize this objective, Morrison (2004) urges the instructors in the universities and colleges to promote the learning process by the use of higher order cognitive skills (analysis, synthesis, and evaluation) as outlined in the Blooms Taxonomy.

Challenges Associated with Active Learning

Despite the fact that active learning has numerous benefits, there are some obstacles that are likely to be encountered when the strategies are employed in higher learning institutions. Bonwel and Eison (1991) outlined the obstacles as;

- i. There is the encounter of adequately covering the assigned course content in the limited class time available therefore may not complete the stipulated content on time.
- ii. It requires more time to prepare on the side of the course instructor therefore may not adopt the strategy.
- iii. There is a possible difficulty when active learning is used in a large class
- iv. In some cases, there may be meagerness of resources to use to carry out the planned strategies.

Conclusion

From the reviewed literature, it is more evident that the adoption of active learning in the higher learning institutions comes with tremendous benefits. Since learners are engaged during the learning process to create new knowledge, there will be an improved class attendance by the learners and that the students learning outcomes will be realized.

Recommendations

Based on the reviewed literature, the following are the recommendations that when adopted can positively impact learning in institutions of higher learning. They are;

- i. Instructors should incorporate the use of active learning.
- ii. Where possible, managers of institutions of higher learning should avail adequate resources to support active learning.
- iii. Lecturers should modify the existing resources to support active learning.

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