



## RESEARCH ARTICLE

### USE OF SCAFFOLDING PRINCIPLES IN ONLINE TEACHING: A CASE OF E – TEACHING 1 COURSE OFFERED BY UNIVERSITY OF AGDER TO PROSPECTIVE ONLINE TUTORS

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#### ABSTRACT

This article analyses the use of Scaffolding Principles in Online Teaching based on the E –Teaching 1 Course offered by the University of Agder that between September to December, 2017 to prospective online tutors. The major purpose of this article was to analyze how the pedagogical principles of Scaffolding were used to enhance the teaching of this particular course to its participants. Throughout the article, one major thread cuts through and this is the understanding of scaffolding as the temporary support given to a learner to enable him/her become an independent learner and a master of the skill or knowledge being used or advocated for by a certain community of practice. Within the article, it is pointed out that Gilly Salmon's 5 Stage Model demonstrates the practical implementation of scaffolding in an online environment. Thus, it is clear that the various activities in the E –Teaching 1 Course were in conformity with the Scaffolding principles as suggested by Gilly Salmon especially with the view that, there was access and motivation to this course by the participants, participants built up teams in the form of groups like Condors, shared information through discussion among themselves and with their peers, constructed knowledge as evidenced from various documents weaved and course work assignment submitted for assessment and finally each participant got an opportunity to view his or her learning through developing a learning portfolio to demonstrate their met a cognition. Inevitably, the article recommends that to a large extent it is important for higher studies to embrace scaffolding such that professionals graduating from higher education institutions have to be scaffolded with the necessary skills and knowledge needed in their communities of practice or occupations.

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## INTRODUCTION

With specific reference to the Quiz in Module four of the E – Teaching 1 course, Scaffolding can be defined as the temporary support offered to students in accomplishing new tasks and concepts they might not achieve on their own and this support and guidance is withdrawn as long as a learner can accomplish or do a task by him/herself. This definition is in agreement with Lajoie (2005) who considers it a temporary entity that is used to reach one's potential in demonstrating competence, and articulation of their knowledge without assistance. Scaffolding therefore requires the teacher's intervention in children's learning through providing young learners with cultural tools to enable them become independent learners (Verenikina, 2008). Some of these tools can include; compelling tasks, templates, learning resources like articles, and more experienced peers as well as teachers or More Knowledgeable others (E – Teaching 1 Course Module 4 quiz).

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Therefore, according to Lipscomb, Swanson and West (2004), MKOs are expected to establish the amount of instructional support for successful teaching and learning encounter.

**Pedagogical Principles of Scaffolding:** There are basically six principles of scaffolding that were presented by Bruner and his colleagues as quoted by Roggof (1990). These principles are;

1. Recruiting the child's interest in the task as it is defined by the tutor.
2. Reducing the number of steps required to solve a problem by simplifying the task, so that the learner can manage components of the process and recognize when a fit with task requirements is achieved.
3. Maintaining the pursuit of the goal, through motivation of the child and direction of the activity.
4. Marking critical features of discrepancies between what a child has produced and the ideal solution.
5. Controlling frustration and risk in problem solving.
6. Demonstrating an idealized version of the act to be performed

**Theoretical Background of Scaffolding:** Scaffolding has its origin rooted in the constructivist and social constructivist

theories of learning and communities of practice (Bjorke, 2016). It is argued by people like Verenikina (2008) while citing Wells (1999) that scaffolding was introduced by Bruner in order to operationalize the concept of teaching in the zone of proximal development (ZPD). ZPD was conceived by Vygotsky a Socio Constructivist as cited by Lajoie (2005) as the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. In other words, scaffolding according to Bjorke (2016) is the learning that takes place in ZPD where newcomers or novices meet and interact with more advanced peers; the More Knowledgeable Other (MKO) and old-timers or masters. Learning is therefore a social interaction process that takes place through socio-cultural development. Lajoie (2005), notes that this theory assumes that every individual has got learning potential that can be reached with scaffolding provided by tutors, parents, teachers, and peers. Among others, Bjorke (2016), points out that for successful operationalization of scaffolding, the following tasks must be observed; processing and assessing knowledge, negotiated meaning and generating and co-constructing new knowledge. Other tasks are outlined by Verenika (2008) and these are transfer of responsibility for the task to the student as the major goal of scaffolding in teaching and breaking content into manageable pieces.

**Practical Implementation of Scaffolding in online pedagogy:** Gilly Salmon 5 Stage Model has guided the discussion on the practical implementation of Scaffolding activities in an online learning environment. According to Professor Gilly Salmon's video available at <https://www.gillysalmon.com/five-stage-model.html>, the stages are Access and Motivation where learners are being recruited into the on line learning system and being given access to the platform; Team building where learners establish learning identity through online socialization and create micro communities for learning; Information exchange where cooperation on learning tasks begins through the design of very good activities by the course facilitator; knowledge construction where group activities with more complex contributions are ongoing, learners are expected to be critical thinkers and inventive in their work and everyone in their learning groups, has a task to do; and finally is the Review Stage where students are now comfortable with collaborating in learning as Bjorke (2016) states that through social constructivism learning which is the backbone of scaffolding what matters is the group effort and not individual marks. At the review stage still, learners are responsible for their own learning and metacognition is at its best. However, through a face to face implementation of scaffolding, Applebee and Langer (1983) as cited by Lipscomb, Swanson, & West, 2004, they outline the following as the major activities of practical implementation of scaffolding;

- **“Intentionality:** The task has a clear overall purpose driving any separate activity that may contribute to the whole.
- **Appropriateness:** Instructional tasks pose problems that can be solved with help but which students could not successfully complete on their own.
- **Structure:** Modeling and questioning activities are structured around a model of appropriate approaches to the task and lead to a natural sequence of thought and language.

- **Collaboration:** The teacher's response to student work recasts and expands upon the student's efforts without rejecting what they have accomplished on their own. The teacher's primary role is collaborative rather than evaluative.
- **Internalization:** External scaffolding for the activity is gradually withdrawn as the patterns are internalized by the students”

#### Context of the Study

For years Makerere University has been offering face to face pedagogy to both undergraduates and graduate students. However, there is an Institute of Open and Distance Education Learning (IODEL) that has been put in place to steer the process of online teaching in the university. However, the institute is still affected by lack of sufficient human resource with the capacity to facilitate online learning. Consequently, as a stop gap measure, the institute entered a memorandum of understanding with University of Agder to ensure that staff are equipped with necessary skills to facilitate online learning in the university.

#### Statement of the Problem

Online teaching and learning is the way to go with provision of modern day education. Students have found themselves too busy that it is hard to have them in the lecture room. Therefore, it is important for education institutions to reach out to the learners and study at their convenience in their own offices. Further, the world has become one and global, we no longer need to board a plane from Uganda to Norway for studies but still we can acquire higher education degrees from Uganda. It is important therefore for higher education institutions to be ready manage such changes. This can be made possible where, institutions like Makerere University equip their academic human resources with not only the tools to do the work but also the skills. Lecturers at universities need to ensure that they can facilitate not only face to face pedagogy but also online teaching or blended model of learning. Consequently, retooling is important. One of such courses that can be based on to retool lecturers is the Online teaching 1 course offered by the University of Agder. However, it is not just important to go through this course but one needs to reflect on scaffolding pedagogical affordances of the course to online tutors.

**Purpose of the study:** The main purpose of this study was to examine the scaffolding pedagogical affordances of online learning offered to participants in the E – Teaching one course of the University of Agder.

**Materials and Methods:** This study surveyed the perceptions of Makerere University lecturers who were enrolled in the E – Teaching one Course of the University of Agder between August, 2018 to December, 2018 about its scaffolding pedagogical affordances in facilitating online teaching. Researchers thought for participants' experiences in the course on how they saw the various aspects of scaffolding implemented in the course of the semester. It was qualitatively conducted through having individual interviews with the participants. The study attracted four willing participants.

#### Scaffolding Activities in the E – Teaching 1 Course Based on Gilly Salmon 5 Stage Model

In line with Gilly Salmon 5 stage model stated above, researchers considered the following to be the major scaffolding activities in the E – Teaching 1 Course;

- Recruitment into this course. This was done both at Makerere University and at University of Agder. Makerere University recommended participants
- to University of Agder which went on to offer them admission into the course. The admission gave them an opportunity to get access to Canvas the online learning platform and became part of the community of practitioners of the E – Teaching 1 Course.
- Secondly, there was an introductory lecture that was delivered by one of the tutors based at Makerere University in the Institute of Open and Distance Education Learning (IODEL) computer lab that highlighted what participants would find along the way. This introductory lecture in the IODEL computer motivated many participants from Makerere University to stay on the course.
- Thirdly, after getting access to Canvas, participants were told to introduce themselves on the main platform and afterwards they were allocated groups such as Condors. Within this group, participants were told to come up with a group contract that guided group members' mode of interaction throughout the semester. Inevitably, team building developed in each of the groups and participants reached a lot of milestones together.
- Various discussion questions were posed by the tutors in the course of the semester. Beginning with group contract in module one. In most cases, members in their virtual groups discussed with each other on their group forum. They participated in a lot of discussions like netiquette, the challenge of finding the balance between: Choice of content. Authority vs. autonomy in the information age. Course content and professorial control vs. individual autonomy, experience, needs and preferences of the student, instructivism and constructivism, Letter to Will and Sophie who were imaginary online learners for the participants but they had taken some good number of days with participating in any online activity and yet exams were forth coming. Participants on this course were expected to write to them and find out the nature of problems that were barring them from online participation. These discussions enabled participants in information exchange which is the third stage of the 5 stage model of Gilly Salmon of Scaffolding learning activities.
- For every, discussion that was initiated by the tutors, participants were expected to select a weaver amongst themselves to come up with a written essay from the discussion thread on the group forum. This resulted into many documents weaved and uploaded in their work spaces on Canvas. Hence forth, these write-ups and the processes through which they went through made develop the capacity to construct knowledge.
- Lastly, it was also established that the course offered self-evaluation opportunities to participants for every module they completed. These self – evaluation opportunities included an end of semester portfolio where participants were required to explain what they have learnt throughout the entire semester by providing links to group weaved essays or individual write-ups on the different tasks that were given in the course of the semester, the end of module quizzes, and a checklist for each module asking participants whether they have completed reading and discussing with colleagues the various units of each module. These assessments

formulate the basis of the Review stage of Gilly Salmon's 5 stage model. In one's good conscience, no one could tick yes on the evaluation checklist if he or she did not understand certain concepts nor could he or she write an aspect he/she never understood apart of his or her achievements in the course.

### **Why are the Activities of E – Teaching 1 Course considered aspects of Scaffolding?**

Besides the fact that the activities in the modules of the course were scheduled in a step by step manner such that they agree with Gilly Salmon's 5 Stage Model of Scaffolding on line learning activities, the activities in the E- Teaching 1 course subscribed to some other features of scaffolding as outlined below;

- To begin with is the community of practice that participants were recruited in. This community is the one of on line learners. Activities in this course were interested in acclimatizing participants in this community.
- ZPD was implemented as the tutors would set scenarios and leave it upon the participants to come up with ideas on how to overcome such situations. E. g participants in this course were tasked with a responsibility of establishing what they could do if two of their would be students do not participate in an asynchronous discussion for the at least eight days and yet there was an upcoming deadline.
- The activities offered opportunities to course facilitators to come in whenever participants were stuck and unaware of what to do next. For example, participants were given a task where all participants in the course were expected to discuss and yet Canvas did not provide such a platform. On the recommendations of one of the participants, the course tutors guided that they should do the sub aspects of the task in their group forum and then share their weaved work in the public café.
- Opportunities for collaborative learning were provided by these activities. This can be seen in the discussions held on the group forum and producing joint documents from those discussions. This further climaxed into a joint coursework on instructivism and constructivism aspects of teaching where members of each group scored a mark and those marks were shared by all members in each group.
- Scaffolding suggests that there is a MKO assisting the new comer. This was evident on many tasks in this course. For instance, participants were tasked to formulate blogs and in formulating their learning blogs, the tutors input and guidance was paramount. This was further improved by a guiding document on how to Create a Blog document by Bjorke and Hao (n.d) that was provided to give guidelines on how to come up with a business blog or website. In other words, necessary tools were given to participants to carry on with the objectives of this course.

### **Conclusion**

From the above discussion, we conclude by noting that scaffolding is the pedagogical approach that requires a teacher to offer some kind of support to learners to reach a level of mastery expected by everyone in such a community of practice.

Learning by scaffolding is collaborative and is socially constructed up to when one reaches proximal levels of development that may require no external help. E- Teaching 1 course if looked at in the lenses of Gilly Salmon 5 Stage model actually provided participants with hands on experience of scaffolding. Thereby, it is recommended for use in higher studies in both face to face pedagogy as well as online or blended pedagogies.

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