ACTIVE LEARNING: AN EFFECTIVE METACOGNITIVE STRATEGY FOR LANGUAGE ACQUISITION

Dr. Sylvia D'mello
Scientific College of Design

ABSTRACT: *Active learning has gained momentum since the past decade as an effective instructional approach which draws students out of their comfort zone and drives them to take an active part into their own learning. This paper addresses the research proven metacognitive strategies that support the utilization of cognitive activators which encourages students to take a vital role in their own learning process. These cognitive activators are a set of meaningful activities which are embedded in the pedagogical framework to encourage more complex thought processes in students to promote language acquisition. This research is contextualized to English language teaching (ELT) in higher education institutions because ELT teaching has experienced a fascination towards the techniques and strategies applied in active learning. Furthermore, it emphasizes the use of these instructional interactive techniques in the classroom to have a strong impact upon students' learning to develop students' writing, speaking and critical thinking skill.*

KEYWORDS: active learning, cognitive activators, student centered, qualitative research

INTRODUCTION

With the advancement in technology and various researches conducted in language learning, the General Foundation Program at Scientific College of Design is always keen to evaluate existing teaching methods and adapt them to a more student-centered approach which has been linked to improved student learning and independent thinking. One student centred approach where the responsibility for learning lies upon the student is active learning. Active learning is a wide-ranging term that refers to a plethora of student-centred approaches as well as instructor-led activities. Active learning involves using methods and techniques that are primarily aimed at the transfer of acquired knowledge to achieve deeper levels of knowledge and understanding. It encourages students to study, allowing them to manage the process independently. Dynamic knowledge is impossible without the active involvement of students in the education process. That is why an instructor must use different discussion techniques to obtain feedback from students, enhance their mental activity, increase interest in learning, and develop independence.

45

This study seeks to address the existing use of active learning approaches by exploring the various teaching techniques and strategies that aim to focus on the active learning process as well as utilizing the cognitive activators. This research is contextualized to English language teaching (ELT) in higher education institutions because ELT teaching has experienced a rapidly increasing fascination towards the techniques and strategies applied in active learning in recent years. Hence it's important to scrutinize the impact by studying the research findings of active learning particularly in the ELT context. The findings reviewed in this study aims to provide appropriate strategies to strengthen Instructors' understanding of the conceptual use of active learning and to provide guidelines for effective teaching/learning principles. In addition, the study aims to provide directions for future research that address the active learning components.

Research questions

1. What is the effect of utilizing cognitive activators to prepare the students to learn independently?
2. What teaching strategies aim to focus on the active learning process?

LITERATURE REVIEW

Teaching is much more than just transmitting` information to students; it is about assisting them in actively engaging in order to assist them to embody explicit knowledge into tacit knowledge. "Learning is not a spectator sport. Students do not learn much just by sitting in class listening to teachers, memorizing repackaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves". (Chickering & Gamson, 1987, p. 3) According to Gunduz & Hursen, students are supposed to create their own understandings based on the information they get from their surroundings and by assimilating this information with their existing schemas. This learning strategy results in internalizing knowledge and skills that promote the ability to apply as well as create knowledge. In other words, students interact with the new information based on their existing schemas to assimilate new knowledge. (Gunduz & Hursen, 2015) To make knowledge acquisition possible, students need to actively participate in their own learning which is active learning. There are various definitions of active learning. For example, Brown defines active learning as an effective strategy in the teaching/learning process where in students are experientially involved in the learning process. He goes ahead and terms it as a mental activity because it is based on student involvement in the process of learning. (Brown, 2007) Another definition highlighted by Bransford is that active learning makes students build their own knowledge by connecting new ideas to pre-existing knowledge to form new understanding based on previous information (Bransford et al., 1999). Furthermore, many educators agree that students are

involved in higher order thinking where they learn more and retrieve more in an active learning setting than they do in a passive learning setting. Active learning also promotes cognitive development whereby the instructor tries to determine the mental model of the student through structures and strategies rather than the mere acquisition of information. Lev Vygotsky's work examined the association between cognitive processes and the learning processes which constructed the theory of development, which placed emphasis on learning that takes place when students either assimilate or modify new information beyond their current developmental level by leveraging peer interaction and instructor support (Vygotsky 1978). Their dependence on teachers gradually decreases and they become more dependent on themselves in their learning. This is the nature of the student-centered approach. Casibra & Gergely have noticed a cognition system that requires active student participation to benefit from the student's innate cognitive abilities to help understand the tasks teacher have initiated for them. (Casibra & Gergely 2006). Prince & Felder state that "Students are the focal point in the cognitive learning theory. As a result, students' autonomy and initiative are functional components, including a significant degree of teacher's involvement in the teaching environment." (Prince and Felder,2006). As active learning pedagogies typically belong to the constructivist epistemology, It is essential to incorporate these learning models as a system of teaching in an actual classroom setting. Biggs elucidates that "teachers need to develop and incorporate learning activities relevant to the subjects they teach, systematically study students' errors and recognize the common understanding about the problems which exist." (Biggs, 1996). There is a huge plethora of literature which highlights the beneficial aspects of pedagogical theories pertaining to student engagement and active participation. The activities the teacher identifies should be appropriate to implement independent learning since these activities determine students' learning. As Biggs reiterates using self-controlled learning activities in a constructivist classroom will make the students well aware of the various learning strategies which will be capable to mold them for independent learning, so that they can become autonomous life-long learners in the future. (Biggs,1996: 354) Yang & Wilson state that the transformation of theoretical frameworks into practical applications with interaction from peers, teachers, and the social environment has a notable effect in the learning of a new language as it emulates real-life circumstances (Yang & Wilson, 2006). Boersma emphasized that "teachers who employ appropriate teaching methods are more likely to motivate students to engage and enjoy language learning. For example, teachers who ask open-ended questions in their classrooms encourage students to develop autonomy through engagement in critical thinking through integration of skills and this empowers and challenges students for real life tasks which reflects one of the characteristics of active learning in the classroom." (Boersma 2008).

Dr. LuAnn Jordan from the University of North Carolina has developed "a whole series of cognitive strategies to help students make connections between

one idea and another. Essentially what is being sought for using these cognitive activators is a way to influence the task as well as the learner. This area is sometimes referred to as cognitivism whereby the teacher is trying to determine what the mental state of the student is." (Jordan 2005)

RESEARCH METHODOLOGY AND ANALYSIS

This Research study utilized the qualitative approach to generate and analyze data. "Once the data were obtained, they were grouped, analyzed and interpreted with the view to answering the research questions. An interpretivist (phenomenological) epistemological perspective was adopted to describe situations, experiences, and phenomena" (Chism, Douglas & Hilson, 2008: 2). This qualitative research is aimed at providing an explicit understanding of the role of active learning patterns in utilizing cognitive activators to transform theoretical frameworks into practical real-world applications. It included a systematic search strategy to interpret recent literature to cover a wide range of original empirical studies that helps in establishing consistency of information. The participants for this study consisted of sixty-six students registered in the General Foundation Program at Scientific College of Design. In this study, the research instrument employed was zoom interviews and classroom observations via zoom with the participants. The utilization of semi-structured interviews is consistent to the views of Creswell who recommended telephone interviews to generate empirical data due to enhanced access to geographically dispersed interviewees and the inability of the researcher to come to a common ground for an interview. (Creswell, 2014. p219) The effectiveness of face-to-face interviews, focus groups, and actual observation are challenged during the COVID-19 pandemic due to area lockdown, close down of college face-to-face teaching, gathering and travel restrictions, etc. Structured classroom observations were also conducted with the use of Zoom, an audio-visual platform that adds visual contact between the researcher and the student. As Johnson and Christensen state that observation is an effective method for gathering data as it helps to identify the discrepancies the participants may say they do or like and what they do in actual. The data gathered functioned as background information which I used to raise additional questions to be used at some point in the interview. (Johnson and Christensen, 2008: 211)

The empirical data were gathered and analyzed using semi-structured interviews and classroom observations and was subjected to descriptive analysis. According to Yildirim & Simsek "Descriptive analysis involves summarizing and interpreting the obtained data based on pre-determined themes, frequently using direct quotations to manifest the interviewed individuals' views in a striking way, and interpreting the obtained results within the framework of cause and effect relationships" (Yıldırım & Şimşek, 2005). The findings gathered were categorised together based on the research questions supporting the study, analysed to describe the findings and forward

recommendations. Since the data analysis was conducted manually using a laptop, the need for a software programme for the analysis was not felt.

DISCUSSIONS AND RECOMMENDATIONS

This research study found results related to both activation of cognitive activators to promote autonomous learning and application of active learning teaching strategies. As part of the data collecting method, one important preliminary data collected was from classroom observation about the effect of the implementation of active learning in the EFL classroom. This data was also used during individual interviews to identify some of the factors that needed further clarification from classroom observation. Due to the inclusion criteria, in-class activities that utilized cognitive activators were designed to actively engage students with the tailor-made material which prepared the students to be autonomous. For example, standard inversion, discussion oriented, demonstration focused, and guide on the side. Active education involves students through learning activities such as critical thinking, reading, role-plays, essay/report writing, discussions, problem-solving that contribute to the evaluation, analysis and synthesis of material.

95% of the students reflected positive opinions in relation to active learning technique. According to Tharayil in the case of studying a foreign language, independent pupils can recognize their learning needs and current level of knowledge. Accordingly, they will seek information about learning and will try to develop language skills on their own. In order to stimulate students to study individually, it is necessary to show the benefits and possible results. Therefore, an effective method is establishing learning goals with learners (Tharayil et al., 2018). Most of the students needed discussions to understand what aspects they need to improve on. Based on the plans, it is essential to determine the priorities of each student depending on his requirements. This division will let each pupil perform specific segments of tasks that will improve their weaknesses. The next step is a detailed plan of how to achieve the goals. When students receive a set of assignments and criteria for their evaluation, they will be able to assess the possibility of realizing purposes. In order to strengthen students' confidence and motivation, it is crucial to prepare a critical assessment of learning outcomes. Moreover, this approach will empower students to understand gaps in knowledge and try to overcome them (Tharayil et al., 2018).

During classroom observation it was also found that some students were distracted and could not follow instructor's new instructions. Few students raised their hands, while the others kept quiet most of the time in the classroom. In addition, during in-class group work sessions low engagement of a few students was observed. Some students were extrovert and dominated group discussion, while some students were quiet and mostly shy. Teachers should identify these silent students who need to be encouraged and coaxed to talk to the other students in their group. Another aspect seen was that almost all the

students focus only on marks attained, so are not enthusiastic to complete formative activities that do not have a score assigned.

To strengthen the active learning process, Instructors should apply research-based techniques and strategies to motivate students to work hard during activities and constantly remind them about the value of utilizing cognitive activators. Instructors should also gather frequent feedback throughout the course and give timely responses to students' concerns. These observations endorse the importance of preparing and tutoring students at the beginning of the semester using active instruction. Instructors should also encourage students to identify their progress from active instruction. Without this motivation, students can be easily misled by the disfluency associated with the cognitive effort which is requirement for active learning. This can have a negative impact on their learning and they may view active learning as detrimental. This motivational push is especially important for students when they are new to active learning.

During interviews, 40% of students indicated that they wanted their instructors to write a response to each learner. Feedback is an integral part of active learning and should contain positive achievements and criticism that will permit them to become independent. To achieve independence, students need to learn to make decisions individually (Matsushita, 2018). The teacher must instruct learners to make simple choices, increasing the responsibility for decisions made over time. Functional training in the classroom also provides pupils with informal opportunities for feedback on how well they have understood the material. 78% of students said that they should be given significant opportunities to ask clarifications. Thus, mutual questioning or open dialogue is critical as students try to ask important questions and seek answers. This process lets students express themselves freely and not be afraid of criticism. In other words, it is the discussion of the topic in the lesson in an accessible format that permits students to utilize information. Also, the method can be effective in preparing for an important exam. 80% of students felt that the procedure of pauses in advance with students is necessary to improve the understanding of the material already studied and be ready for new information. This pause enables them to review a fundamental matter or summarize it before analyzing another topic. Moreover, they wanted a system in explaining difficult-to-understand material. According to Matsushita, the active learning approach is creative because student themselves interpret the data and pass it on to teammates in a simple way. Recording the most complex information allows the tutor to assess students' level of knowledge and explain incomprehensible material (Matsushita, 2018). 82% of students felt this method was difficult because they needed an explanation of additional material, and students found it challenging to learn the task. They wanted the class to start with a review section by highlighting content from the video/text topic followed by a q and a session. Furthermore, they wanted a short lecture targeted specifically at the misconceptions and struggles to be given mid-class. To reinforce learning,

50

instructors need to give students online activities as a home assignment to reduce the possibility of dependence of instructor reviews but watch videos on their own. The non-standard way of presenting knowledge will allow students to remember the topic and analyze all possible interpretations. Finally, giving learners the chance to give lectures to classmates will increase students' attention to the material presented (Matsushita, 2018). This method was appreciated by 94% of students because they were allowed to practice the skills of presenting information to others. "Peer teaching involves one or more students teaching other students in a particular subject area and builds on the belief that to teach is to learn twice" (Whitman, 1998). Essentially this model allows educators to monitor students during sessions and offer feedback to ensure no gaps in student knowledge.

CONCLUSION AND FUTURE RESEARCH

Despite impressive advances in the teaching process and motivation to introduce these innovations in an English language class, the findings generated from this study emphasizes the presence of challenges for instructors and students in the teaching and learning process while introducing active learning. Active learning is impossible without the active involvement of students in the learning process. In order for students to derive maximum benefit from these active learning strategies, instructors should commit to full implementation of these practices at all times. Effective learning involves using a system of methods aimed mainly not at the presentation of ready-made schematic knowledge and its reproduction but the independent acquisition of knowledge by students in the process of progressive cognitive activity. Also, to develop students' confidence and the ability to learn independently, it is necessary to involve them in the learning process and to discuss progress at regular intervals. Teachers also need to be prepared for the flexibility of new teaching techniques to ensure the effectiveness of results. Therefore, active learning requires a lot of attention to strategy development to ensure student progress.

This research study, being a qualitative classroom based action research, raises a number of opportunities for future research in the active learning arena. I believe that further study in this area would be greatly beneficial to ELT teaching and learning to facilitate the complete assimilation of such innovations into the education system. More research will in fact refine and further elaborate these findings

References

Biggs, J. (1996). Enhancing teaching through constructive alignment. High Education 32, 347–364. https://doi.org/10.1007/BF00138871

Bransford, J.D., Brown, A.L., and Cocking, R.R. (Eds.) (1999). How people learn: Brain, mind, experience, and school. Washington, D.C.: National Academy Press

Brown, D. (2000). Principles of Language Learning and Teaching. https://www.researchgate.net/publication/247252022_Principles_of_La nguage _Learning_And_Teaching

Casibra, Gergely & Gyorgy. (1999). Social Learning and Social Cognition: The case for pedagogy. http://www.citeulike.org/user/hawesie/article/20597

Chickering, A. & Gamson, Z. F. (1987). Seven principles for good practice. https://www.ltrr.arizona.edu/fp/geog695c/PDFs/7+Principles+of+Good +Practice+in+Undergrad+Ed.pdf

Creswell, J. W. (2014). Research design: qualitative, quantitative, and mixed methods approaches / SAGE Publications Inc. London

Gunduz N., & Hursen, C. (2015). Constructivism in Teaching and Learning; Content Analysis Evaluation. https://www.researchgate.net/publication/282536521_ Constructivism _in _Teaching_and_Learning_Content_Analysis_Evaluation

Jordan, L. (2005) An Introduction to Cognitive Strategies. University of North Carolina,Charlotte.http://www.specialconnections.ku.edu/cgi-bin/cgiwrap /specconn/main.php? cat= instruction section

Johnson, B. and Christensen, L. 2008. Educational Research: Qualitative, Quantitative, and Mixed Approaches. 3rd ed. London: Sage.

Matsushita K. (2018). An invitation to deep active learning. In Deep active learning (pp. 15-33). Springer.

Prince, J.M. and Felder, M.R. (2006) Inductive Teaching and Learning Methods: Definitions, Comparisons, and Research Bases. Journal of Engineering Education, 95,123-138. http://dx.doi.org/10.1002/j.2168-9830.2006.tb00884.x

Vygotsky, L. S. (1978). Mind in society. Cambridge, MA: Harvard University Press.

Whitman, Neal A.; Fife, Jonathan D., Ed. (1988) Peer Teaching: To Teach Is To Learn Twice. ASHE-ERIC Higher Education Report No. 4, 1988.

Yang, L. & Wilson, K. (2011). Second language classroom reading: a social constructivist approach.https://www.researchgate.net/publication/255587044_second_ language _classroom_reading_a_social_constructivist_approach

Yildirim, A., & Simsek, H. (2005). Qualitative Research Methods in Social Sciences (5th ed.). Ankara Sekin Publications.