







A contemporary teaching and learning approach to enhance active learning using the newly proposed O-P-A (Optical, Physical and Acoustic) model

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Abstract

This study introduces a new model namely O-P-A (Optical, Physical and Acoustic) model to enhance active learning. The newly proposed model contributes to extend the current literature of the V-K-A model (Visual, Kinaesthetic and Auditory) for active learning. Three activities are implemented at three stages of the research, with each one involves in different approaches and methods to active learning. The impact of the newly proposed O-P-A model in overcoming passive learners in the Media and Society course is also investigated. Preliminary survey were carried out prior to implementation of approach to get a feel of the existing class delivery problem and post implementation survey is carried out to obtained feedback on the implementation of the new approaches Positive findings about the interactive classrooms are often confounded with active learning pedagogy. Our findings confirm that the interactive and active learning approaches create a positive learning environment which induces great outcomes.

Keywords: OPA; VKA; Interactive Learning; Active Learning; Teaching and Learning.

1. Introduction

An effective teaching and learning process will effect the learning objectives and also be able to provide satisfying results for student learning outcomes. One of the way is to do interactive learning. According to Javaeed, Kibria, Khan, and Ghauri (2020), educator should not consider media as only tools for teaching and learning. Instead, when conducting teaching and learning on media, the education about communication and media is equally important. For instance, when teaching students about computer games or social media, students should not learn only about the content of the games and social media, but as well as the understanding and critique underlying these media. The sense and effective use of interactive learning therefore will cultivate the students a comprehensive set of competencies, such as creativity, communicative, socialized and intellectual.

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College instructors and professors has been operating under a paradigm in which they knowledge was imparted to students by mean of information transfer (Taylor & Parsons, 2011). The act of being engaged also adds to the foundation of skills and dispositions that is essential to live a productive and satisfying life after college. That is, students who are involved in educationally productive activities in college are developing habits of the mind and heart that enlarge their capacity for continuous learning and personal development.

Based on the problem of students' individual learning style, passive learners resulted in a dull learning environment and one-way interaction. In this teaching, students passively receive information from the instructor and internalize it through some form of memorizations and this process is characterized as passive learning (Campbell & Blair, 2018). The search for the best approach has led educators to explore many different teaching techniques, ranging from the traditional lecture class to various experimental approaches such as active learning.

In accordance with the current development, one of the learning media that can be applied by the students in the 4.0 era is a technology-based media is interactive classroom. Interactive classroom is combination of of images. animation. video. and sound that allows users to interact directly (Carini, Kuh & Klein, 2006). Interactive implies acting upon or in close relation with each other (Kahu, 2013). Interactivity in learning, on the other hand, could be define as “capacity for interacting and learning by way of conversation, dialogue, or action”. The term “interactive” is a method where the learner is regarded as a participant of a learning process and is expected to perform certain actions. The students are not meant to be on the receiving side, but instead, are expected to take part actively in activities and therefor, becoming the driving force behind the classroom (Daouk, Bahous, & Bacha, 2016). Daouk, Bahous, and Bacha (2016) further suggest that interactive learning will allow participants to gain new knowledge and insights by mean of collective activities.

Although a rich variety of forms and practices within familiar basic paradigms had been implemented, some surprising silences still exist in learning and teaching. According to Hart (2013), recurrent lack of attention was given to classroom interaction and dialogue, space for young people's own experience and knowledge, opportunities for active involvement in class activities, teaching in context through engagement and learning about media. The issue of students' active involvement in the class was addressed by Pain, Chen and Campbell (2016) who explored how using a team-based approach to bolstered students' ability to learn to tell stories using text, photos, video, social media, radio, and blogs. Their findings revealed that this approach helped students to do multimedia journalism, rather than just learn about it.

The present study introduces a new model namely O-P-A (Optical, Physical and Acoustic) model for interactive and active learning to enhance the active learning. The newly proposed model contributes to extend the current literature of the V-K-A model (Visual, Kinaesthetic and Auditory) (Carini, Kuh & Klein, 2006) for active learning. This discussion will focus on Media and Society course. Much active learning occurs in Media and Society courses due to the media and communication nature of course assignments, which are typically a classroom setting. Thus, this study aims to identify the factors that contributes to passive learning in Media and Society course and to investigate the impact of O-P-A model in overcoming passive learners in media and society course.

2. Literature Review

2.1 General learning styles

Gilakjani (2012) articulate that learning styles can be divided into three categories: Optical (visual), Physical (kinaesthetic) and Acoustic (auditory). Optical learners or visual learners visualizes and learn

best in visual images. They favor facilitator's non-verbal cues such as body language which helps them to understand better. It is observed that optical learners prefer to be sitting in the front of the classroom. They also take descriptive notes over the material being presented. Kinaesthetic learners, on the other hand, learn best with an active "hands-on" approach. These learners favour interaction with the physical world and staying idle can lead them to becoming unfocused effortlessly. Last but not least, acoustic (auditory) individuals discover information through listening and interpreting information by the means of pitch, emphasis and speed.

The work of Gilakjani (2012) indicated that about 50% of the opt for visual learning style, followed by 35% of student for auditory learning and the remaining 15% of the students preferred kinaesthetic learning style. Undoubtedly, visual learning style has become the prevalent learning style among the students and has resulted in great academic achievement. Nonetheless, further assessment is required to understand as to how we, as educators, can improve students understanding by grasping the ability to deliver in various mode. The ability of delivering in various mode will then allow us to easily approach student that has different learning style.

2.2 Active Learning and Interactive Learning

In this section, we discuss two main important approaches of the study namely the active learning and interactive learning. In the literature, these two approaches were reviewed as being disengaged towards each other. Thus, we revisit these two components here along with their relationships towards academic performance respectively.

2.2.1. Active learning

Active learning can be described as teaching and learning activities other than listening that are meaningful and make them think about what they are doing. A research on the efficacy of active learning approaches was carried out by David and Less (2013) by making comparisons with conventional teaching ways for an immense number of Arts and Sciences subjects. To achieve this, they distributed the students into two main categories namely conventional lecture approach and active learning lecture approach. The findings revealed that the average increase in the regulated exam results of active learning lecture students was substantially greater than that of conventional lecture approach students. Students following the active learning lecture approach also demonstrated fewer disparity in their academic achievements when compared to the conventional lecture approach students.

In the same vein, a study was conducted by Gilakjani (2012) to perceive the influence of different learning styles towards teaching activities among 100 Iranian EFL university students. Here, the most famous learning styles known as the visual, auditory and kinaesthetic were made as the main focus. Even though the students utilized all the human senses to gather details, they appeared to be having their own choices when it comes to deciding on the best ways of learning. Thus, it is vital for lecturers to practice as much as they can of these choices to assist their students. There is also an urgency for lecturers to assimilate these learning styles into their curriculum plans to ensure their students can pass with flying colors. From the questionnaires distributed regarding the students' choices of individual learning styles, it was found that the visual style came first among all other learning styles. Without doubt, this study aids in getting a grasp of the influence of learning styles on teaching activities, as well as helping to intensify the awareness of academicians in this matter.

Ibrahim and Hussein (2016) targeted on a specific group of occupation by examining freshman nursing students on the basis of visual, auditory and kinaesthetic learning styles. In their opinion, learning styles is defined as the capacity of learners to interpret and develop intelligence in educational circumstances. Lecturers who are able to integrate the learning styles of visual, auditory and kinaesthetic into their teaching practices can help students excel in their learning subjects, besides

enhancing the outcomes of their course plans. It was found from their study that the learning styles of the nursing students was distributed as 40.0 percent for Visual, 29.5 percent for Auditory and 30.5 percent for Kinaesthetic respectively. They also investigated the type of favored learning styles across genders, where the ladies were found enjoying the auditory learning style the most (30.3 percent) compared to the gentlemen (27.3 percent). For the gentlemen, their most favorable learning style was kinaesthetic (32.3%) as opposed to the ladies (29.8%).

2.2.2. Interactive Learning

Interactive learning pedagogy, on the other hand is an approach that incorporates social networking into course design and delivery (Delialioğlu & Yildirim, 2007). The use of digital technology and virtual communication has given rise to interactive learning. Students entering the university in digital era are expecting interactive learning as integral part of their education. The use of interactive technology in learning in present days is as natural as using a pencil and paper in the good old days.

Along with technological advances, interactive learning has become an inseparable part of modern teaching and learning that has a significant impact on today's educational practice (Dillion & Gabbard, 1998; Koedinger et al., 1997). As a result, currently there exist various types of interactive learning methods providing many types of support, and serve as a crucial tool for learners attempting to master certain skills or subject matter. An instructor's proficient mastery on these interactive facilities would help determining the achievement of the desired learning outcomes among individual learners.

A recent inquisition conducted by Li, Yamaguchi and Takada (2018) showed that two experimental design of 285 teachers in teacher learning affirmed that greater learning contentment was experienced by teachers who indulged in interactive learning resources. The study also disclosed that improved teaching evaluations was the catalyst for the teachers who utilized the interactive learning medium for self-improvement. The results of the investigation indicate that interactive resources had a substantial effect on the link of motivation with improved performance, as well as learning contentment.

3. Method

3.1. Phase 1: Identify the factors contribute to passive learning

In order to identify the root cause to student not being active in their learning, a preliminary survey was conducted to assess the students' level of satisfaction to the class, as well as examining how much they have understood from the class. Finally, the survey opened an avenue for the student to make recommendation on the types of learning approach they would like their instructor to conduct to make themselves more interested to learning. An online survey using google form was conducted.

3.2. Phase 2: Implementation of active learning

Following through, the team decided to conduct an action research to examine the claim.

Three activities were implemented at different stages of the research. Each activities incorporate different approach and methods to interactive learning. Activity one focused on interactive learning involving Physical and Optical to which the instructor pasted photos related to politics, war, lifestyle and entertainment around the classroom and requires the student to move around the classroom, looking at the photos and then shared their feelings while watching these materials in a reflection mode. At the end of the activity, each group were requested to select the photos that has the strongest emotional impact on them.

The second activity was on interactive learning involving visual and auditory to which the students were given opportunity to watch YouTube videos on nationalism and patriotism. Students are then

required to discuss on the content of the video and share their feelings and thoughts among group members on whether these videos has cultivate nationalism and patriotism among them.

While activity three involved interactive learning and active learning in which the student were asked to prepare a short video documentary (creating a short video) on a particular social issue and conducted a presentation to the rest of the class member. The aim of the documentary was meant to create social and civic awareness on the social issues that surrounds the Malaysian society.

3.3. Phase 3: Impact of the active learning

In this stage, the researcher intends to use peer observations, post course satisfaction survey and student reflection to assess the effectiveness and the impact of the newly propose O-P-A model for active and interactive learning.

Peer observation allows for collegial feedback on quality of teaching as well as obtaining an objective overview of the students' engagement during the implementation of O-P-A model. Post satisfaction survey, on the other hand, probed the student's contentment on the effectiveness and efficacy of the O-P-A model in their course learning and finally, post implementation reflection by the students allowed the researcher and the instructor to assess the detailed student's feedback on the new teaching approaches.

The research team conducted an overall evaluation on the effectiveness and the impact of the implementation of the O-P-A model. The lecturer involved were asked to write a full reflection of what she thought about implementing the activity. In the similar vein, to get a full idea of what the student thinks about the effectiveness of the implementation, a descriptive analysis comparing the pre-implementation and post-implementation of the O-P-A model was conducted.

4. Findings

4.1. Results of preliminary survey to understand factors contributing to passive learning.

A thematic analysis was conducted on the factors that contributes to passive learning by looking at the reflection of the instructor prior to conducting the action research. A detail analysis from the reflection write-up by the instructor brought forth the following content:

"The students relied solely on my notes and explanation",

"The students spend the entire period not engaging",

"The students refused to participate in Q & A session",

"They just sit, listen and accept without response",

"They are daydreaming" and,

"They remained silent even if they don't understand".

The underlying issue to this action research was that the instructor realized that students is not showing interest in the class and that they were very passive in learning. Intuitively, the instructor realized that reasons contributing to this phenomenon would be that of: i) evening class, ii) content of the chapter that is too dull, iii) learning style of the student that requires active learning and not traditional lecturer. In addition, the three colleagues, who plays the role of observer requested the instructor to conduct a reflection on her class. It was realized that the instructor observed that her students are passive and they were looking for activities to work out in the class. Realizing that nothing much to be done on element i) and ii), the instructor invited three colleagues to discuss if element of number iii) could be one of the causing factors for their lack of interest in learning.

An in-depth discussion between the three observers on the instructor's write up suggested that the instructor was dealing with a group of passive learners which has somewhat impacted the motivation of the instructor in class delivery. She also remained clueless on how to proceed with the class in the foreseeable future. The instructor was keen on making learning more fun and interesting to the students.

In the similar vein, a preliminary survey was conducted to understand the students' satisfaction and their understanding towards the content of the class. The first question asked the students their level of satisfaction with the teaching method employed in the class. Data from the survey suggest that the students have a moderate level of satisfaction (mean = 3.77 out of a scale of 5) with 6 (10.2%) students give a rating of 2, 14(23.7%) students give a rating of 3, 26(44.1%) students give a rating of 4 and finally, 13 (22%) students give a rating of 5.

At present, are you satisfied with the teaching method employed by your lecturer in this class?

59 responses

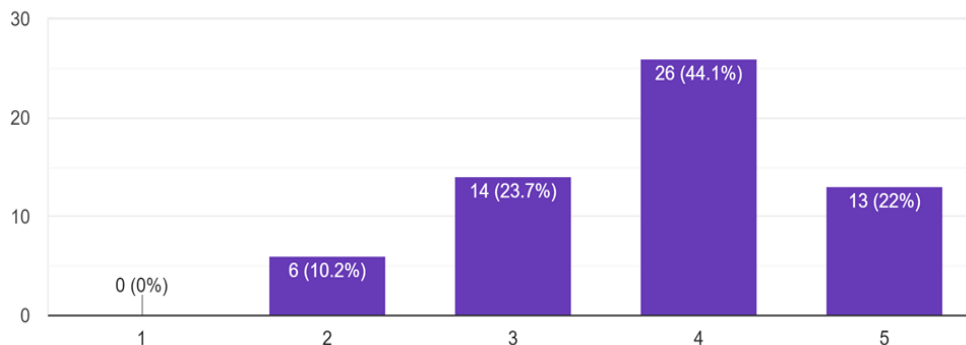


Figure 1. A preliminary survey on satisfaction towards teaching method

When asked about how much they have understand the topic of the subject, the result yields a moderate level of understanding towards the topic (mean = 3.86). 3 (5.1%) students rate a score of 2 for their level of understanding, 12 (20.3%) students rate a score of 3, 34 (57.6%) students rate a score of 4 and finally, the rest of the students (16.9%) give a rating of 5.

How much do you understand on the previous topic taught by your lecturer?

59 responses

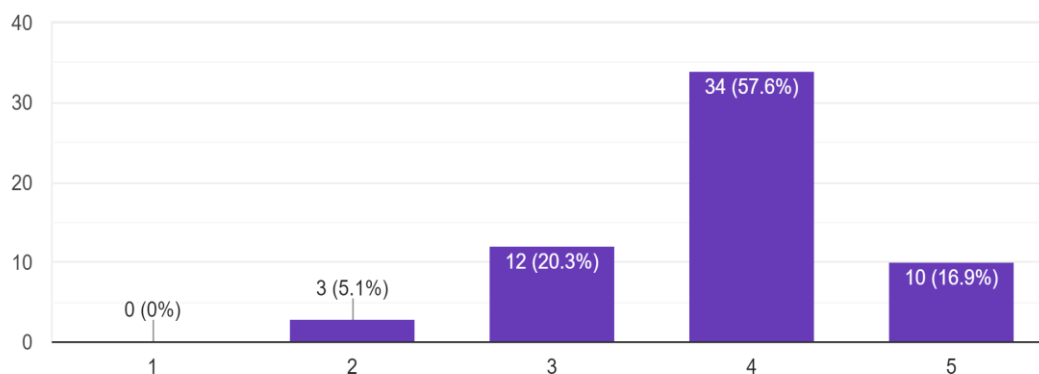


Figure 2. A preliminary survey on understanding towards topic

On top of these close ended survey, students were also requested to provide additional comments on their level of satisfaction towards the teaching approach as well as their level of understanding in class in by means of open-ended question. The following excerpt are some of the responses collected.

Comment 1: “Because even though she (the instructor) did not do any activities, she still ask questions that require students to answer”

Comment 2: “Because she only talks & explains, No jokes or fun activities”

Comment 3: “I only understand the topic when it is interesting to me”

Comment 4: “Because sometimes it is hard to understand the materials even though I try to reread it at home. I prefer more example”

The preliminary survey also incorporates an additional question: “if there are rooms for improvement in the class teaching and delivery, what would be the kind of teaching and delivery methods that you would like your instructor to implement?” Surprisingly, the feedback on this question was astonishing. 67.8% of the student responded that they would like the instructor to incorporate interactive games using gadgets like Kahoot. 10.2% responded that they would like the instructor to use video related materials in class delivery and another 10.2 of the students responded that they would like the instructor to conduct group discussion and hands-on class activities. In sum, almost 90% of the student are looking forward to active and interactive learning in the class which further justify the objective for this action research.

If there are room for improvement in class teaching and delivery, what would be the kind of teaching and deli...would like your lecturer to implement?

59 responses

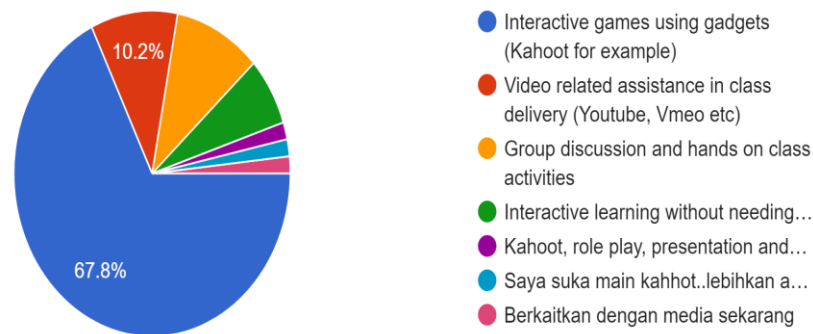


Figure 3. A preliminary survey on suggestion for improvement

4.2. Results from activities implementation

4.2.1. Peer observation findings from Activity 1: Physical and Optical Interactive Learning

The first activity focuses on interactive learning involving Physical and Optical to which the instructor pasted photos related to politics, war, lifestyle and entertainment around the classroom and requires the student to move around the classroom, looking at the photos and then shared their feelings while watching these materials in a reflection mode. At the end of the activity, each group were requested to select the photos that has the strongest emotional impact on them.

The team of observers note that when student are required to walk around the classroom to look at the photos, discussion began to take place among the students. They begin to exchange their viewpoints and feelings about the photo. The following feedback are some of the information collected at the end of the activity:

Comment 1: "When we look at the photos, we experience emotional changes and it helps us to understand the phenomena more than the text-based information"

Comment 2: "Visual image capture our attention more than text"

Comment 3: "We no longer feel sleepy when we can walk around the classroom"

Comment 4: "We are able to share our thoughts with our members through this activity"

4.2.2. Peer observation findings from Activity 2: Optical and Acoustic Interactive Learning

In the second activity, the auditory element was incorporated. Student were required to watch a 20-minute video and paying attentive attention to the content. The video content enables the students to see concepts and new examples when they are watching the video with their friends. It is observed that while the video was playing, the students began to discuss to one another on the content of the video. Nonetheless, some of the students were found playing with their mobile phone and not paying attention to the video. Notwithstanding that there are possibilities that student still does not have enough interest in the content of the video, some of the student might just be using their gadgets to search for more information related to the video.

In general, the condition in the class has again improved from the previous classes though both the observers and the lecturer came into agreement that the condition can be improved further until it reaches satisfactory level. Thus, the third activity is planned, and much more active learning element is emphasized.

4.2.3. Peer observation findings from Activity 3: Optical, Physical and Acoustic Interactive Learning

In the third activity, student is required to produce a three-minute video with regards to the topic given. This video is to be uploaded to YouTube and is to be presented to fellow classmates when the next class take place.

In the third attempt to incorporate active and interactive learning, vast improvement was seen. All observers agreed that the third activity has seen more engagement and participation among classmates. The ability and the effort to create creative short documentaries amazes the observer. The message from the video created was delivered in an easy-going and enjoyable manner. Going through this activity, the students began to understand the importance of communication and interaction among peers as well as engagement in the class that will facilitate learning in a more interesting approach. They began to realize that they too, can make learning more fun and interesting if they are properly guided by their instructor.

4.3. Post implementation survey and evaluation

The team of observer develop 5 survey questions to obtained feedback from the students on the 3 activities implemented in the class. The first question asked the students whether the recent three classes where interactive and active learning is implemented are more enjoyable and interesting as compared to the previous. 56% of the student provide a rating of 5 which is the highest rating, followed by 32.1% of the student who rated 4. The balance 11.3% of the student rated 3 and no student gives a rating of 1 and 2.

The second question asked the students whether the recent improvements in the class can stimulate the students' learning interest. Almost 90% of the student responded that the new approach to teaching and learning manage to stimulate their learning interest towards the class.

The third question asked the students if they manage to observe their peers showing sign of interest in the class with the new teaching approaches. More than 85% of the student gives a rating of 4 and 5 implying that the students realized that their peers began to show sign of interest in the class with the new teaching approaches.

The fourth question asked the student if the class is more proactive with more interactions and discussions after the instructor change the way of teaching, 97% of the students agree that the class has becoming more proactive.

The final question asked the students to rate their level of satisfaction with the new approaches. More than 90% of the students rate a score of 4 and 5 implying that they are happy and pleased with the new approach of teaching implemented by their instructors.

All these statistical findings were supplemented with constructive comments from the student. We provide some excerpt of the comments below:

Comment 1: "I enjoyed the class because the now I can walk around the class and learn during the activity rather than just receiving the information while sitting."

Comment 2: "Thank you for initiating this, having group activities make us more confident towards ourselves."

Comment 3: “I hope the instructor will continue to maintain this new teaching approach in the future. It is very interesting.”

5. Discussion and Conclusion

Contemporary research denotes that high engagement in class leads to improved learning. Based on the experience in the classroom, there were ways to help create engaging classroom, encouraged effective delivery methods, and foster positive learning environments.

We realized that students are passionate about things that relate to their own lives. For instance, instead of just telling the students about the history of media, using YouTube video could help better understanding as visualization and guided imagery bring more electiveness and relevance to the students.

Besides, it is observed that peer learning is a natural phenomenon in modern days education, which is said to have been able to keep the students from zoning out in class discussion. Thus, we conclude that keeping students in small-to medium sized group discussions in class is an amazingly effective learning process.

Furthermore, lecturers should promote and foster a positive learning environment through various students' interests through simple activities such as chatting with them about their interests, needs or being concern about their wellbeing. This will create a sense of belonging within the students before they can engage critically. An interactive and active learning environment surely could produce a positive learning environment with great results.

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