A survey on the student engagement in physiology education among dental students
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ABSTRACT

Introduction: Retrieval practice and flipped classrooms are kinds of deep learning techniques. Flipped classroom alters the conventional learning environment and brings out innovation and creativity in the teaching and learning process. The flipped classroom will enhance the way the students receive information from their teachers. This improves a better understanding of the context, improves the cognitive skills, and enhances the conceptual learning of the students. Materials and Methods: A survey was taken among 100 dental students, and a questionnaire was distributed to find out how and in what ways students were engaged in deep learning and exploring techniques and how they performed active learning strategies. Results: According to the results and the statics made, it is found that more than 45% of the student population has found flipped classroom far better than a regular classroom. A flipped classroom is more of a blend of online and activity based one rather than a normal teacher based one. It improves team skills, learning methodologies, and various other techniques. The concept of delivering content varies from person to person according to their own view of perspective. Conclusion: Although traditional way of learning is practiced all over the world at times, only the flipped classroom comes hand in hand where students recall a concept of interest from memory.

KEY WORDS: Flipped class, Innovative teaching, Traditional classroom teaching

INTRODUCTION

An individual’s physical and mental well-being is defined as stress.[1] Dentistry comes across stress in the way of scheduling pressures, high intensity and nature of work.[2] This causes a drastic change in education and leads to psychological distress affecting the performance of the students.[3] Among most of the dental students, academics, examination, and the fear of grades are the foremost sources of stress.[4] Different resources of physiological education are implemented to make student’s lives stress free with easier deep and peer learning techniques.

One such effective technique is the active learning which is the retrieving and recalling of concepts by various resources.[5] Active learning is the student participation or attainment to knowledge. It is said that the use of such technique helps in improving the cognitive skills of the students. It is favorable and has a very great impact on less advanced students too.[6] More the engagement of students, more is the development of skills such as critical thinking, analyzing, and synthesizing.[7]

One form of active learning is the flip teaching technique which is gaining a lot of attention these days.[8] It emphasizes the relationship between modern education and clinical practices. This technique involves in interactive group-based learning, problem-solving activities, video lectures, technology-based resources, laboratory activities, and much more.[9] Retrieval practice and flipped classrooms are kinds of deep learning techniques.[10,11] In traditional classroom learning, teacher is the center of focus and the activity is limited in small groups. However, in a flipped classroom, the learner is centered, and by the use of technology-based resources, the content delivery varies from person to person according to their perspective.[12] In a flipped learning, it includes more of activity learning rather than traditional homework practices. This improves a better understanding of the context, improves the cognitive skills, and enhances...
the conceptual learning of the students.\cite{13} In such type of learning, the student-teacher interaction is more personalized and helps in more activity-based learning and knowledge acquisition. The students’ engagement and participation are more in a flipped class than in a traditional class.\cite{14}

**MATERIALS AND METHODS**

A survey is taken among 100 dental students. A questionnaire will be raised among them about the physiological education and various resources related to this. The results are obtained and analyzed. This survey is conducted to determine the cognitive capacity of the students.

**RESULTS AND DISCUSSION**

According to the survey taken, these were the following results obtained. For each resource, data were obtained and the results were calculated according to students’ preference.

The student’s preferences to the various learning techniques revealed that they preferred PowerPoint presentations and other flipped learning techniques rather than a boring classroom lecture. In such cases, the students find to grasp the content easily than in a lecture-based classroom because it is more of a students’ way of understanding from their own way of perspective [Figure 1].

Moreover, it is also found that the students are so much satisfied with this type of physiological resource they preferred [Figure 2].

According to the various physiological resources provided, student’s preferred online videos, laboratory activities, and other critical thinking exercises which were found to improve the cognitive basis and skills of students [Figure 3].

To improve their cognitive skills, students took up a test and they gave their way of finding the answers. Most of the students looked up online and only a few preferred looking over the textbooks. Moreover, this is found to prove that online plays a major role in student’s lives as this is a modern era [Figure 4].

As per the physiology courses, the students have uptaken, and it is found that students have made a lot of improvement compared to the ones who have not engaged themselves in such type of courses [Figure 5]. These showed a significant improvement and these students who engaged to such activities were found to have higher course grades. It was also found to be valuable approach for future studies and academic achievements.\cite{15}

![Figure 1: What kind of learning techniques do you prefer?](image1)

![Figure 2: How satisfied are you with the amount you learned in this course?](image2)

![Figure 3: Among these, what do you think is more helpful?](image3)

![Figure 4: What strategies did you uptake to complete those critical thinking exercises?](image4)

![Figure 5: Improvement comparison](image5)
CONCLUSION

As a major finding of this study, the students were asked to rank the helpfulness among these various physiological education methods and majority of them voted for resources which are computer based or online based which plays a major role in all flipped classrooms around the world. These were likely to improve the cognitive skills who engaged themselves in such education rather than people who do not tend to explore themselves.

REFERENCES


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