

Comparison of students' performance in Anatomy practical in online and offline teaching method

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Abstract

Introduction: With the increasing use of technology, online learning has become a common teaching method. This article aims to evaluate whether online learning when compared to offline learning can give same or better results of undergraduate medical students in practical examinations.

Material and Methods: As a result of lockdown head and neck region of 2020 batch was taught online. Many Histology practicals were taken online. Classes of batch 2021 were taken offline. Group 1 consists of Batch 2020 that is online group, batch 2021 constituted the offline group or Group 2. Then we compared marks of head and neck practical vivas well marks of histology practical of both groups.

Results: Mean marks of offline practical viva of Head and Neck region was significantly more in offline group. Highest marks are same in both groups. There is no significant change in marks of Histology practical in both groups.

Conclusion(s): As the mean marks of practical /viva are more in offline group, online teaching can be used in emergency but according to our study it can be an alternative but not the choice where Anatomy practical is concerned.

Key words: Anatomy, Online Teaching, Practical

Introduction

With the increasing use of technology in education, online learning has become a common teaching method. During Covid 19 pandemic online teaching was the only option. Due to COVID-19 lockdown, the teaching of medical students got a sudden, unplanned change from conventional teaching to online teaching.^[1] With the government policies of lockdown and educational institutions closure, including medical colleges, online methods were the only means to continue with teaching learning (T-L) and assessment activities.^[2] This article's aim is to evaluate whether online learning when compared to offline learning can give same or better results of undergraduate medical students. This study particularly aims at comparison of practical knowledge of students in online and offline mode.

Online methods include delivery of the latest evidence-based material to learners and promoting self-directed learning.^[3] At the same time, the evaluation of competencies through online assessments, thus enabling learners to receive feedback for self - improvement can also be done simultaneously.^[4] The unique challenge is to enable students to have an access to content (resource material) as well as interactively engaging students in active learning.^{[5],[6]}

Material and Methods

As a result of lockdown head and neck region of 2020 batch was taught in online mode. Many classes of Histology practical were taken in online mode. Classes of batch 2021 were taken offline. So Group 1 consists of Batch 2020 that is online group whereas batch 2021 constituted the offline group or Group 2. Then we compared marks of head and neck part completion practical viva of both groups as well marks of histology practical of both groups.

Results

Table 1

	Mean marks in head and neck PC (Practical/viva) MM-100	Mean marks in Histology spotting MM - 20
Group 1	61 with SD 8.1	12 ,SD 0.56
Group 2	68 with SD 3.2	16 SD 1.2
p-value	>0.05 insignificant	<0.05 SIGNIFICANT

NUMBER OF STUDENTS WITH MARKS IN H & N PRACTICAL	GROUP1	GROUP2	p-value
<50	22	14	<0.05 SIGNIFICANT
50-60	48	34	<0.05 SIGNIFICANT
61-70	32	56	<0.05 SIGNIFICANT
71-80	30	35	>0.05 insignificant
81-90	15	10	>0.05 insignificant
>90	03	01	>0.05 insignificant

Discussion

Online teaching usually collects higher quality of questions, comments, and discussions from online learners.^[8]

Extrapolating the principles of Good Teaching Practices, as had been done by Vyas *et al.* review,^[9] to online teaching, various effective online teaching programs and faculty development programs can be formulated. For a program to be sustainable and practical, various principles of good online teaching learning and assessment practices^{[9,10],[11]} should be included in study...

A study suggested that online-assessment should be modified or adapted to formative or summative assessments for documentation of the educational experience.^{[12],[13]}

We conducted this study as per above guidelines. In our study there is no significant difference between two groups in number of students with >70 marks.

But this study suggested that more students are getting passing marks and more than 60% marks in head and neck viva in offline mode that is group 2.

In histology spotting a significant increase in performance was observed in offline mode.

Conclusion(s) –

As the mean marks of practical /viva are more in offline group, online teaching can be used in emergency but according to our study it can be an alternative but not the choice where Anatomy practical is concerned.

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