



The Effect of Online Teaching on High Stakes Assessment in the Pre Clinical Years





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INTRODUCTION

- The COVID 19 pandemic disrupted teaching delivery in many institutions of higher learning.
- Many medical schools had not exploited the full potential of simulation and online teaching when the pandemic landed in Malaysia.
- In March 2020 we had to make a rapid transition from a face to face to online delivery of the curriculum as the country went into lockdown.
- This paper looks at the performance of students in the Year 2 Professional Examination due to changes in delivery.



METHODS

- A comparative study on professional examination results for pre-clinical years in the MBBS programme
- Examination results from an academic year with Face-to-Face teaching (2018-2019) was compared with one with online teaching (2019-2020)
- Since the movement control order started in March, about half of the academic year (2019-2020) was entirely conducted online.



RESULTS

Table 1. Comparison of results of different components between 2017 and 2018 cohorts

	2017 Batch (n=190)		2018 Batch (n=155)		t- value*	p-value
	mean	SD	mean	SD		
Year1	16.6	4.38	16.9	4.17	-0.663	0.508
MCQ	59.8	12.0	56.2	10.7	2.929	0.004
OSPE	54.6	18.4	66.8	18.2	-6.131	< 0.001
OSCE	66.6	12.1	48.7	14.0	12.696	< 0.001
Pro1 PartB	33.9	7.53	34.6	6.91	-0.898	0.370
Total	55.9	12.8	58.3	11.0	-1.850	0.065

- When the results of the 2018-2019 cohort was compared with the 2019-2020 cohort, there was a statistically significant difference between performance in the MCQ, OSPE and OSCE portions of the examination.
- There was no significant difference in the overall results.



RESULTS

- In the analysis, there are strong correlation between Year-1 result and Professional Exam result. The correlation between Year 1 performance and OSCE was the weakest among all.

Table 2. Pearson Correlation Coefficient between Year 1 and other components •

	Year 1 (2017 Cohort)	Year 1 (2018 Cohort)	Year 1 (Both Cohorts)
MCQ	0.687	0.687	0.677
MEQ	0.773	0.773	0.773
OSPE	0.816	0.816	0.761
OSCE	0.539	0.539	0.428
Pro1 PartB	0.844	0.844	0.822



DISCUSSION

- In our study, there is no difference in the final results between two cohorts which supports the proposition that online teaching has the same impact on assessment as Face to Face teaching.
- This is supported by Ngyuen VA that Students who effectively interacted with learning activities have better results (1) and by George PP et. al. that online eLearning is equivalent, and possibly superior to traditional learning (2).
- Also Bientzle M et. al commented that online learning platforms are particularly helpful whenever learners engage in active elaboration in learning material, such as by answering MCQs or taking notes.(3)



CONCLUSION

- While there was no difference in overall performance, it appears that the cohort with face to face delivery did better in the MCQ and OSPE components. The cohort with online delivery did better in the OSPE component.
- This indicates that either method of delivery is effective. Final performance may depend on student motivation and participation in class.
- Performance in year 1 was a good predictor of year 2 outcomes whether face to face or online teaching was used.
- Long term outcomes in terms of performance should be tracked to see if there is any impact in the clinical years for these two cohorts.



TAKE HOME MESSAGE

- Face to face and online teaching both have advantages and disadvantages.
- Over and above the method of delivery is the interaction of students to ensure good outcomes.



REFERENCE

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THANK YOU