Post Pandemic Era: Online to Hybrid & Face-to-Face Teaching- Clinical Neuroscience Education Perspective

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Background

COVID-19 forced academic institutions around the world to engage with remote modes of teaching. This posed a particular challenge to medical schools. Although e-learning was being utilised to a limited degree pre-pandemic, in response to this unprecedented challenge, medical education had to evolve rapidly to remote teaching. During the academic year 2021-22, there was a gradual transition to hybrid and face-to-face teaching. We present our experiences with this using student feedback.

Objectives

To compare and analyse quantitative and qualitative student feedback on the Neuroplus (clinical neurosciences) placement at St. George's, University of London medical school, during the academic year 2022-2023 (approximately 10%-16% purely online) compared with 2020-2021 (almost entirely online).

Methods

The anonymized student feedback for the Neuroplus placement was collated for the six student cohorts across the academic year July 2022-May 2023 (138 students, 61.6% response rate) and the eight student cohorts from July 2020 to July 2021 (177 students, 62.5% response rate). They were asked: "How would you rate the quality of the Neuroplus placement overall?", with 5 possible choices of answer – excellent, good, satisfactory, poor or very poor. The number of students ratings of 'excellent' or 'good' were collated, to calculate an overall satisfaction rate for the placement. The comparison was done using the Chi-square test (2x2 contingency table) comparing [Excellent + Good] ratings with [Satisfactory + Poor + Very Poor] ratings across the two cohorts. Additionally, students' comments were filtered using keywords such as "online", "face-to-face", "hybrid", "in-person", "MS Teams", "Panopto" and "pre-recorded" to qualitatively assess the feedback pertaining to the mode of delivery.

Results

The mean satisfaction rate of the academic year 2020-2021 (online teaching) was 62.71%, while the mean 2022-2023 satisfaction rate (face-to-face teaching) was 77.54% (figure 1). The highest overall satisfaction was attained in the last two blocks with scores of 90% and 95% respectively.
The comparative analysis revealed a significant increase in the percentage of excellent and good for the current academic year as compared with the academic year of 2020-2021 (P= 0.004) (Table 1).
The qualitative feedback review showed that most students preferred face-to-face teaching or a hybrid model, though a minority did express a preference for online teaching. Some of the students' comments are summarised in Table 2.
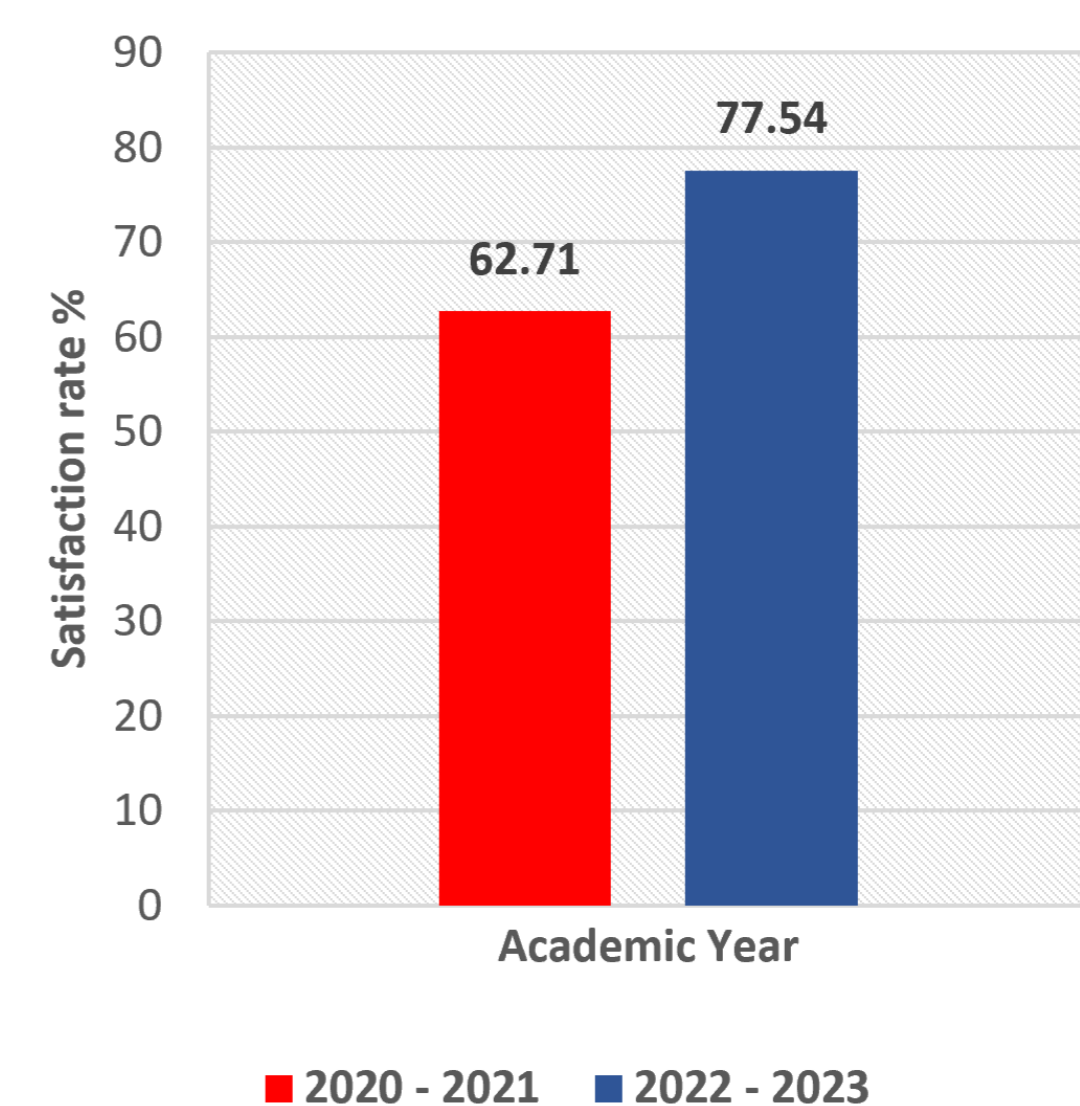

Figure 1: The overall satisfaction rate (excellent and good) of the academic years 2020-2021 and 2022-2023

Table 1: The sub-categorization of satisfaction grades for the academic years 2020-2021 and 2022-2023

Rating	2022 – 2023 (n = 138)		2020 – 2021 (n= 177)	
Excellent	39 (28.26%)	107 (77.54%)	30 (16.94%)	111 (62.71%)
Good	68 (49.27%)		81 (45.76%)	
Satisfactory	21 (15.21%)	31 (22.46%)	49 (27.68%)	66 (37.29%)
Poor	8 (5.79%)		14 (7.9%)	
Very Poor	2 (1.44%)		3 (1.69%)	

Chi-squared test (2x2 contingency table) comparing [Excellent + Good] ratings with [Satisfactory + Poor + Very Poor] ratings across the two cohorts which gives a **p value = 0.004**

Table 2: Examples of student's feedback and opinions

Method	Comments
Online Teaching	Many of the students mentioned that they do not enjoy the continuation of online teaching, and some of them mentioned their lack of interest in the pre-recorded lectures. – " Unsure why covid is still being used for things being online " – " Hours of online videos are not engaging " – " For it to have been a bit more hands on - the online format was tiring " – " Make neuro-rehab day in person instead of online "
Face-to-face Teaching	Many of the students declared their desire towards the transition to face-to-face teaching as this will be more interactive. – " In person lectures more interactive " – " Enjoyed the in-person teaching " – " Make teaching in-person instead of virtual " – " More face-to-face teaching "
Mixed (Hybrid) Teaching	Some students mentioned their interest in having a mixed pattern of teaching, especially for the introductory week lectures, as this makes their schedule more flexible. – " I do like the blended teaching, enjoyable hybrid placement " – " Liked the blend of online and in person teaching we received " – " Good mixture of online and in person teaching " – " Face-to-face contact and more than just a team's presentation "

Conclusions

- Although online learning became essential during the COVID-19 lockdown, **student satisfaction significantly increased when face-to-face Neurology teaching returned.** However, there are other variables that may affect this satisfaction rate.
- The majority of students found **face-to-face teaching particularly useful for learning neurological examination technique** and observing clinical signs.
- **Some students prefer a hybrid model** of online and face-to-face teaching.
- Given these results, **greater emphasis will be placed on face-to-face teaching** when planning future Neurology undergraduate placements, although some elements of online learning in a hybrid format will continue. Future studies on the impact of digital learning on delivering neurosciences placement are needed to shape the structure of placements.