



COVID & the Curriculum: Faculty Perspectives

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Student and Faculty Perceptions of Dental Education During the COVID-19 Pandemic

by

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The COVID-19 pandemic directly impacted dental education at the NYU College of Dentistry by forcing the College's transition from in-person to remote education. All didactic, pre-clinical, and clinical courses transitioned to remote instruction after students returned from spring break on March 23, 2020. Clinical activities and in-person instruction gradually resumed in the summer of 2020 but are still not back to pre-COVID levels. As of September 2021, large didactic courses were still being taught remotely.

In fall 2020, the Academy of Distinguished Educators convened a working group to examine how the curriculum changes in response to COVID affected the students and instructors at NYU Dentistry. Some of the changes to the dental and dental hygiene curricula made to comply with University, local, and federal guidelines were:

- Remote instruction, small group discussions, and instructor office hours via Zoom
- Doing pre-clinical lab work remotely with equipment delivered to students at home
- Discussing clinical cases with faculty via Zoom before the student sees patients face-to-face
- Taking exams remotely via ExamSoft.

The working group sent out two similar surveys: one to instructors and one to students. The NYU IRB

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approved this study (IRB-FY2021-5066). Responses were collected in December 2020 and January 2021.

A total of 248 people responded to the survey (74 instructors and 174 students). We asked the faculty about the number of years of teaching experience and the year of graduation for students. This information is shown in Table 1.

TABLE 1: Demographics of Survey Respondents

Respondents: 74 Instructors

Category	1-5 yrs	6-10 yrs	11-15 yrs	> 15 yrs
Experience	14	13	12	35
Job Type	53	21		

Respondents: 174 Students

Category	Sections					
Class Year	D1 / 61	D2 / 64	D3 / 20	D4 / 9	DH / 7	PG / 13

Student and Faculty Opinions of Remote Learning

Respondents were asked to rate the changes to the curriculum on a seven-point Likert scale. Table 2 shows the mean scores of students and instructors for each aspect of the curriculum. Two-tailed t-tests comparing the student and instructor mean ratings showed that the two groups differed in how they viewed small group discussions in Zoom breakout rooms, students doing preclinical lab work at home, and remote exams taken on ExamSoft.

TABLE 2: Mean Rating of Curriculum Changes

Each part of the curriculum was rated on a 7-point Likert scale (*7 = like a great deal, 4 = neither like nor dislike, 1 = dislike a great deal*).

	Students/mean (sd)	Instructors/mean (sd)
Lectures via Zoom meeting	4.45 (2.21)	4.98 (1.83)

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Lectures via Zoom webinar	4.36 (2.31)	4.98 (1.84)
Zoom breakout rooms for small-group discussion*	3.84 (2.03)	4.90 (1.8)
Doing pre-clinical lab work at home*	2.36 (1.76)	3.86 (2.06)
Discussing cases remotely with faculty prior to seeing patients in clinic	4.24 (2.08)	5.29 (1.99)
Taking exams remotely via ExamSoft*	4.87 (1.82)	3.66 (2.23)
Office hours via Zoom	4.25 (1.91)	4.84 (1.77)

Asterisks indicate aspects for which student and instructor mean ratings differed significantly ($p < 0.001$).

Most of the faculty were full-time, experienced teachers. In fact, none of the instructors who responded were in their first year of teaching, which means that all of the instructors had taught prior to the COVID pandemic. Most student respondents were in their first or second year of dental school.

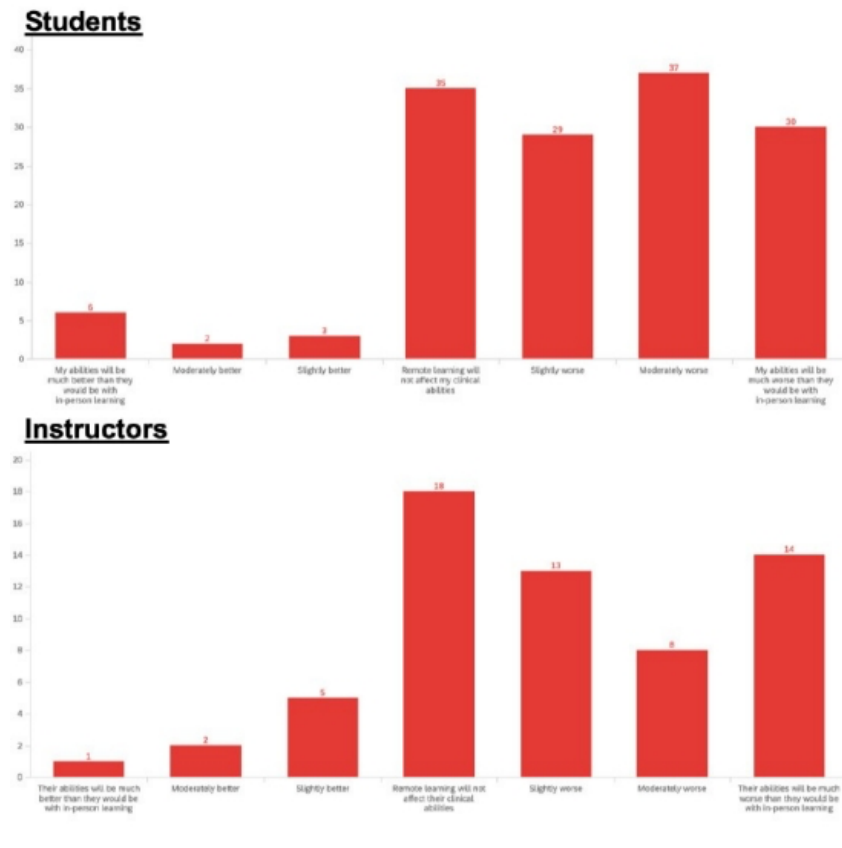
When examining the curricular changes that transitioned as much of the current curriculum to remote instruction as possible, we found that there were differences between student and instructor opinions. Students liked taking exams and attending lectures remotely via Zoom, and very much disliked doing preclinical work remotely. Instructors liked discussing clinical cases remotely and giving lectures via Zoom, and disliked remote exams. Students felt more positive than instructors about remote exams, while the reverse was true for Zoom breakout rooms and for preclinical work done remotely. The difference between the mean ratings of students and faculty was most extreme for preclinical lab work: both groups disliked the move to doing this type of work remotely, but students felt extremely negative about it.

Because of students' extreme dislike of remote lab work, this type of classwork should be done in person whenever possible. Other changes to the curriculum, such as remote lectures, might be worth keeping.

Fears About How Remote Learning Could Affect Future Clinical Abilities

Another question asked students how they thought remote learning would affect their ability to practice dentistry. This question was re-worded for the faculty survey to ask how remote learning would affect the future clinical abilities of the students. Again, respondents answered using a seven-point Likert scale. The responses to this question are shown in Figure 1.

FIGURE 1: Answers to the question “How do you think remote learning will affect the abilities of you/your students to practice dentistry in the future?”



Both students and faculty members were anxious about how remote learning would affect the students. When responses were grouped by whether respondents thought remote learning would have a positive, neutral, or negative impact on future clinical abilities, students and instructors did not significantly differ in their opinions (Chi-square = 2.392, df = 2, $p = 0.30$). 7.7% of students and 13.1% of faculty members answered that students' clinical abilities would be slightly-to-much better with remote as opposed to in-person learning. 24.6% of students and 29.5% of instructors thought that there would be no change. 67.6% of students and 57.3% of instructors thought that clinical abilities would be slightly-to-much worse.

It is important to note that these are subjective opinions of students and instructors in the winter of 2020-2021. There is no evidence that there has been any impact on the clinical abilities of dental students who have graduated since the beginning of the COVID pandemic.

What Students Would Like Their Instructors to Know

Finally, we asked students what they would like instructors to know about student experiences during the pandemic. The most common student responses fell into one of the following categories:

- Faculty members need to be proficient with the technology used (Zoom) and they need the appropriate

equipment (good microphones and cameras)

- Students need more engagement and interaction with faculty members and classmates
- Communication among administration, faculty, and students should be improved, especially regarding schedule changes. Students don't feel that their voices are heard
- Student mental health is suffering.

As remote learning has continued, faculty members have surely become more adept at using Zoom and other necessary technologies. Hopefully, as we increase our in-person teaching, students will feel more connected to their teachers and classmates.

Future Studies

Another survey of the NYU Dentistry community would be informative now that more courses are being taught in person. It would be interesting to know if the way students and faculty feel about the impact of remote work on clinical competence has changed. Additionally, it seems likely that more face-to-face interaction with their instructors, peers, and patients would improve students' feelings about their mental health.

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