What Makes Effective Online Teaching: Student Engagement During the Covid Pandemic

Melody Edwards
University of Central Oklahoma

Marty Ludlum
University of Central Oklahoma

Therese L. Williams
University of Central Oklahoma

Edward Walker
University of Central Oklahoma

Kristen Gregory
University of Central Oklahoma

ABSTRACT

In the spring of 2020, students and educators faced an abrupt change. Most classes went to online learning, while others transitioned to a synchronous remote structure. In the hasty switch, there was little regard for the best practices for online learning. Students were forced into a learning environment they had rarely experienced, and, in some cases, feared. Faculty members with limited experience or desire to teach online had no option. Teachers and learners were anxious about COVID-19’s threat to their health, and experienced stress due to the rapid changes in educational delivery.

The authors developed an 11-item scale on student perceptions of professors’ effectiveness in online teaching. We administered this survey to a large regional university in the southwest USA (N=1000). We found that students overwhelmingly want to have detailed and clear instructions, and weekly feedback from their professors. We found that years in school, major, and employment had no significant impact on desired feedback. However, non-traditional students (older students, married, and those with children) wanted more feedback.

Key words: Survey, online, student, Covid, feedback, interaction

INTRODUCTION

Just a decade ago, only a quarter of students had taken an online course (Quillen, 2015). The pandemic changed everything: teaching, learning, and research (Romanow, Cline, & Napier, 2024). The COVID-19 pandemic forced global higher education institutions to move to digital distance learning for safety reasons (Milich, Fisher, & Sobral, 2024). Almost two hundred countries temporarily closed their educational institutions, affecting more than 1.5 billion students worldwide (Sohail, 2022). Student learning struggled at all levels (Wills, 2024).

The involuntary conversion of all students to an online format led to anxiety in both students and professors (Williams et al., 2023). The urgent imperative to ‘move online,’ caused by the Covid-19 pandemic, added to the stresses and workloads experienced by university faculty and staff struggling to balance teaching, research, and service obligations (Rapanta et al., 2020). Faculty had to prepare and deliver their classes from home, often without proper technical support.

The teaching and learning environment has not changed much (McQuiggan, 2012). However, teaching online is not the same. Faculty will not intuitively know how to teach online effectively. What worked in their traditional classroom may no longer be helpful in the online classroom. New views of teaching and learning need to be cultivated for online delivery. Quality teaching remotely is possible, particularly if professors accept that teaching online requires mastering new skills, an awareness of online pedagogies and best practices, and more time (Moon, 2017).

Not everyone was prepared to teach online (Kapanjie, 2018). Darby (2019) predicted: “Most of us don’t know how to teach online or how to get better at it — and we may not be motivated to learn. Even more likely, we may not feel like we have time to learn.”

When the Covid pandemic started in early 2020, colleges shifted to remote learning out of necessity (Villasenor, 2022). With large in-person gatherings in classrooms suddenly off-limits, online instruction was viewed as the lesser of two evils—inferior to in-person classes, but infinitely better than no classes at all. In the panic, we failed to address how much student engagement is needed for successful online learning. The current project hopes to examine this void.

LITERATURE REVIEW

The professor’s interaction with students plays a pivotal role in the success of an online class. Effective learning involves human relationships—even if we are not physically together in a classroom (West, 2021). While it is possible to participate in a course where the student reads a textbook, completes assignments, and takes exams without communicating with an instructor, that type of experience is hollow.

Instructor feedback is essential for student progress (Rottmann & Rabidoux, 2017). Kelly (2014) described many ways to provide feedback to students in an online course. When selecting the type and frequency of feedback, consider what the students want and how they will benefit from it without creating unreasonable work. If students receive vague, unactionable, or non-specific feedback regarding their performance on assignments, they will feel discouraged (Smyth, 2021).

Another critical aspect of effective feedback is timeliness (Sadulski, 2022). Providing feedback as soon as possible is helpful for online learners. Otherwise, students may repeat the

same mistakes on the next assignment if they are waiting on an instructor’s comments (Mullikin, 2020).

Previous research has emphasized a professor's significant role in online instruction. Two Romanian universities examined online teaching and concluded when learning is done exclusively online, the disadvantages of online learning outweigh the advantages (Coman et al., 2020). The lack of technical skills and adaptability to online teaching were cited as contributing factors. Further, these factors created poor communication and a lack of teacher interaction. The authors stated that a challenge of online learning was changing how teachers interact with students. They suggested that teachers must be open and available to students to increase their involvement and should avoid the appearance of being disinterested.

Engineering students were surveyed on the transition to online learning, and noted that while students had improved their writing skills and their ability to plan their work, they also expressed less satisfaction with their courses, feeling that they had received less feedback and comments, and feeling that workloads had become heavier (Warfvinge et al., 2022). The authors speculated that these issues would decline with technological improvements and increased instructor competence in transferring into online mode.

Professors and students from 13 European countries were investigated and found that, while there was an overall positive outcome associated with a switch to online teaching, it was offset by less interaction and feelings of isolation (Tartavulea et al., 2020). There was a perceived decline in overall teaching effectiveness, active learning, and student-teacher communication.

Medical students in the United Kingdom were examined and found that online teaching was neither enjoyable nor engaging and that opportunities to ask questions were limited (Dost et al., 2020). However, many students cited issues with technology as an impediment to effective learning.

Safraz et al., (2022) also analyzed online learning by medical students and concluded that readiness for online learning increased the probability of achieving desired learning outcomes. However, lack of technology skills, poor motivation, and difficulty in understanding course content were negative factors.

Williams et al., (2023) surveyed a large sample of USA students and found that students believed they learned less in an online class, the online discussions were lower quality, and that quantitative courses were more difficult online. They also found that 94% indicated online students must be self-motivated, and 10 to 1 said they must be more disciplined. Additionally, by a ratio of 7 to 1, students preferred the flexibility of an online class.

Zhang et al., (2020) examined US undergraduate business students’ perceptions of online teaching quality and determined that students felt that they learned more in face-to-face classes and enjoyed them more. However, they also had a positive impression of online learning and found online instructors responsive. Factor analysis of the data revealed that teaching presence and instructional design were the most critical factors. Within teaching presence, the top three factors were that the instructor provided clear instructions, communicated important due dates, and shared essential course goals. The technical competence of the instructor was also vital, as was instructional design, which included course navigation, instructor feedback, and instructor enthusiasm. Overall, this study suggested that the competence and motivation of instructors were critical factors in surmounting the gap between face-to-face and online learning.

The literature cited above provides a common thread. Overall, students are dissatisfied with online instruction that lacks interaction with the professor. The Covid-19 crisis provided a

unique opportunity to get feedback from all students about online education, especially those who had not previously chosen online courses. Our current project will provide additional insight into the students’ desired feedback style while maintaining a mix of demographic variables.

We divided this project into several research questions:

Do students want online instructors to be more interactive?

Do students want more timely feedback?

How much interaction is too much for online courses?

In addition, we examined whether any feedback views were different based on demographic factors, such as age, major, or employment.

Data Collection and Research Methodology

Data was collected using an IRB-approved online survey via Qualtrics. The survey was available to all undergraduate and graduate students at the authors’ university from November 23, 2020, until March 27, 2021. During this period, there were 1,160 recorded responses, with the first question filtered for student enrollment during either the Fall 2020 or the Spring 2021 semesters. Responses that did not answer the enrollment question affirmatively or were not completed were filtered out from the responses. A sample of 1,000 responses remained.

Demographics

Survey responses were spread amongst the student population, with upper-level students being over-represented, with 10.8% being first-year students, 9.8% as sophomores, 30.7% as juniors, 38.9% as seniors, and 9.8% as graduate students. All colleges at the authors’ university were represented, with the largest group being from the business at 38.9%, then education at 15.3%, math and sciences at 14.1%, liberal arts at 11.4%, nursing at 7.8%, and the smallest percentage was from fine arts at 3.4% (9.1% chose “other”).

Over 70% of our student population worked while attending college, with 30.4% working full-time, 42.6% working part-time, and 12.3% actively searching for work. Only 14.7% of the respondents were not currently working by choice. Our respondents were primarily traditional-aged students, with 68% between 20 and 30. Most (83%) were unmarried, and 82.1% did not have children. Only 4.7% of our sample had military experience. Half of our sample (48%) identified as a first-generation college student, defined within the survey as a student whose parents did not graduate from a 4-year college.

This project was heavily influenced by the events surrounding the Covid-19 pandemic. Most students (88%) indicated they knew someone who had tested positive for Covid-19, and 38% reported they knew someone who had died from Covid-19. At the authors’ university, about one-third of classes are scheduled to be online each semester. During the Fall 2020 semester, these continued to be offered. In addition, all traditional, face-to-face courses were offered with an online component. Students could choose whether they would attend in the classroom with required masks and social distancing or if they would rather attend class online synchronously. As the semester progressed, the number of students physically on campus dwindled to near zero. The instructors determined which virtual platform, Zoom, Webex, or Microsoft Teams, would be used for their course. The present study did not distinguish between existing asynchronous online classes and the emergency extended sections.

Students were asked, “How many online courses have you completed before Fall 2020?” Almost half (47.7%) responded with four or more previous online classes. Those that had not

taken any online courses were 15.6%. We asked, “How many online or extended section courses are you taking in Fall 2020?” Over half (57.4%) were taking three or more online classes.

Results

Our goal was to expand the depth of our understanding of the expectations and preferences of interaction by online students while expanding the analysis. We included eight demographic variables: age, year in school, major, employment, marriage, having children, military experience, and First-Generation status. (Gender information was not gathered due to a technical issue). In addition to demographics questions, we asked eleven questions about the preferences and expectations of college students regarding feedback from their online professors.

The text of the questions is in the appendix. Full statistics are available from the authors. For each statement, we used a seven-point Likert scale, with 1=strongly agree; 2=agree; 3=somewhat agree; 4=neither agree nor disagree; 5=somewhat disagree; 6=disagree; and 7=strongly disagree. We used SPSS for analysis. We reported statistically significant results using chi-squared for comparisons of groups.

To obtain student feedback, we offered the first statement: “My online professor should be more present.” In our sample, the mean was 3.45 (somewhat agree), 44.43% agreed, 38.14% remained neutral, and 17.42% disagreed. As we expected, online professors were likely not engaged in their courses during this time of adjustment.

Table 1. My Online Professor Should Be More Present

Q32_1	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	125	12.89	125	12.89
2 = Agree	166	17.11	291	30
3 = Somewhat Agree	140	14.43	431	44.43
4 = Neutral	370	38.14	801	82.58
5 = Somewhat Disagree	52	5.36	853	87.94
6 = Disagree	85	8.76	938	96.70
7 = Strongly Disagree	32	3.30	970	100.00

Of the eight demographic variables, only three had statistically significant differences. Married students (x^2=14.415, df=6 p=.025), Older students (x^2=321.773, df=252, p=.002), and students with children (x^2=28.998, df=18, p=.048) wanted professors to be even more present.

For our second statement, we investigated the presence of online professors and their level of interaction. We offered the statement, “My online professor should be more interactive.” Over 51% of respondents agreed with this statement. In our sample, the mean was 3.33 (somewhat agree).

Table 2. My Online Professor Should be More Interactive

Q32_2	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	125	12.89	125	12.89
2 = Agree	196	20.21	321	33.09
3 = Somewhat Agree	181	18.66	502	51.75

4 = Neutral	308	31.75	810	83.51
5 = Somewhat Disagree	53	5.46	863	88.97
6 = Disagree	79	8.14	942	97.11
7 = Strongly Disagree	28	2.89	970	100.00

Of the eight demographic variables, only two were statistically significant. Older students (x^2=340.410, df=252, p=.001) and students with children (x^2=26.733, df=18, p=.084) wanted more interactive professors than average.

Next, we inquired about student perceptions of workload in their online classes. To learn more, we included the statement, “My online professor should provide a more balanced workload.” An overwhelming 65.85% of respondents agreed with this statement. The authors did not ask specifically about student perceptions of the quantity of workload – too much or too little – only the balance. For our sample, the mean was 2.83 (agree).

Table 3. My Online Professor Should Provide a More Balanced Workload

Q32_3	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	199	20.54	199	20.54
2 = Agree	255	26.32	454	46.85
3 = Somewhat Agree	184	18.99	638	65.84
4 = Neutral	239	24.66	877	90.51
5 = Somewhat Disagree	33	3.41	910	93.91
6 = Disagree	49	5.06	959	98.97
7 = Strongly Disagree	10	1.03	969	100.00

Of the eight demographic variables, only three were statistically significant. Married students (x^2=19.822, df=6, p=.003), older students (x^2=373.779, df=252, p=.001), and students with children (x^2=44.777, df=18, p=.001) needed a more balanced workload.

Students’ lives were disrupted during the height of Covid-19, and even today. They were dealing with their health, the health (and sometimes loss) of relatives, quarantine, lockdown, loss of job or income, and transitioning away from face-to-face learning. Unsurprisingly, during this time of change and uncertainty, students were all looking for understanding from those around us. In response to the statement, “My online professor should be more understanding.” Sixty-two percent of students agreed, and only 11.05% disagreed. For our sample, the mean was 2.94 (agree).

Table 4. My Online Professor Should Be More Understanding

Q32_4	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	199	20.56	199	20.56
2 = Agree	228	23.55	427	44.11
3 = Somewhat Agree	169	17.46	596	61.57
4 = Neutral	265	27.38	861	88.95
5 = Somewhat Disagree	37	3.82	898	92.77
6 = Disagree	51	5.27	949	98.04
7 = Strongly Disagree	19	1.96	968	100.00

Of the eight demographic variables, only three were statistically significant. Married students (x^2=19.343, df=6, p=.004), older students (x^2=359.480, df=252, p=.001), and students with children (x^2=31.689, df=18, p=.024) wanted/needed more understanding than most.

Nearly 70% of respondents agreed with the statement, “My online professor should give more clear instructions.” One element of online learning is the lack of repetitive communication opportunities. It is important in this medium to ensure instructions are clear and understandable for all students in a course. For our sample, the mean was 2.70 (agree).

Table 5. My Online Professor Should Give More Clear Instructions

Q32_5	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	278	28.69	278	28.69
2 = Agree	224	23.12	502	51.81
3 = Somewhat Agree	173	17.85	675	69.66
4 = Neutral	189	19.50	864	89.16
5 = Somewhat Disagree	31	3.20	895	92.36
6 = Disagree	54	5.57	949	97.94
7 = Strongly Disagree	20	2.06	969	100.00

Of the eight demographic variables, only three were statistically significant. Married students (x^2=17.055, df=6, p=.009), older students (x^2=391.007, df=252, p=.001), and parents (x^2=42.882, df=18, p=.001) desired more instructions than the average student.

Next, we investigated how students felt about the quantity of feedback received from their online professors. Students wanted more, but what kind of feedback? How often? What amount is too little or too much? We posed the question, “My online professor should provide more feedback in terms of quantity.” For our sample, the mean was 2.89 (agree). Over 62% agreed with this statement.

Table 6. My Online Professor Should Provide More Feedback in Terms of Quantity

Q32_6	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	204	21.05	204	21.05
2 = Agree	239	24.66	443	45.72
3 = Somewhat Agree	166	17.13	609	62.85
4 = Neutral	259	26.73	868	89.58
5 = Somewhat Disagree	35	3.61	903	93.19
6 = Disagree	50	5.16	953	98.35
7 = Strongly Disagree	16	1.65	969	100.00

Of the eight demographic variables, the only statistically significant ones were married students (x^2=20.267, df=6, p=.002), older students (x^2=356.994, df=252, p=.001), and students who were parents (x^2=39.638, df=18, p=.002). These non-traditional students wanted more feedback in quantity than the average student.

Next, we considered online professor feedback in terms of quality. We offered the statement, “My online professor should provide more feedback in terms of quality and detail.” 68.63% of respondents agreed with this statement, which did not surprise the authors. For our sample, the mean was 2.73 (agree).

Table 7. My Online Professor Should Provide More Feedback in Terms of Quality and Detail

Q32_7	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	233	24.05	233	24.05
2 = Agree	256	26.42	489	50.46
3 = Somewhat Agree	176	18.16	665	68.63
4 = Neutral	217	22.39	882	91.02
5 = Somewhat Disagree	33	3.41	915	94.43
6 = Disagree	40	4.13	955	98.56
7 = Strongly Disagree	14	1.44	969	100.00

Of the eight demographic variables investigated, only three were statistically significant. Married students (x^2=16.282, df=6, p=.012), older students (x^2=392.179, df=252, p=.001), and students with children (x^2=56.141, df=18, p=.001) desired more details in the feedback given to students.

In addition to feedback quantity and quality, we inquired about student perceptions of feedback timeliness. We offered the statement, “My online professor should provide more feedback in a timely fashion.” Sixty-four percent agreed with this statement, with only 9% disagreeing, a six-to-one ratio.

Table 8. My Online Professor Should Provide More Feedback in a Timely Fashion

Q32_9	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	216	22.2	216	22.2
2 = Agree	222	22.8	438	45.1
3 = Somewhat Agree	192	19.8	630	64.8
4 = Neutral	248	25.5	878	90.3
5 = Somewhat Disagree	34	3.5	912	93.8
6 = Disagree	47	4.8	959	98.7
7 = Strongly Disagree	13	1.3	972	100

Of the eight demographic variables, we found only older students (x^2=336.815, df=252, p=.001) needed more timely feedback than the typical student.

Next, we asked how often students might like to hear from their online professors. We posed, “I would like to hear from my online professor once a month.” The results were mixed, as 37% agreed, but 25% disagreed, which did not serve as an endorsement for once-a-month contact from the professor.

Table 9. I Would Like to Hear from My Online Professor Once a Month

Q32_15	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	94	9.70	94	9.70
2 = Agree	166	17.13	260	26.83
3 = Somewhat Agree	107	11.04	367	37.87
4 = Neutral	279	28.79	646	66.67
5 = Somewhat Disagree	82	8.46	728	75.13
6 = Disagree	153	15.79	881	90.92
7 = Strongly Disagree	88	9.08	969	100.00

In this question, none of the eight demographic factors were statistically significant.

Next, we asked whether once-a-week contact was desired. For once-a-week feedback, students were in favor by a fourteen-to-one ratio. These results provide strong evidence that online students like hearing from their professors regularly, and once a month is too sparse, but once a week is a good balance. This also matches a face-to-face class, as they would meet at least once a week (if not more), providing consistency for the students.

Table 10. I Would Like to Hear from My Online Professor Once a Week

Q32_14	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	193	19.92	193	19.92
2 = Agree	334	34.47	527	54.39
3 = Somewhat Agree	175	18.06	702	72.45
4 = Neutral	219	22.60	921	95.05
5 = Somewhat Disagree	18	1.86	939	96.90
6 = Disagree	22	2.27	961	99.17
7 = Strongly Disagree	8	.83	969	100.00

Even with this strong preference, some students want even more frequent feedback. Of the eight demographic variables, three desired more feedback than once a week, those being married students (x^2=11.425, df=6, p=.076), older students (x^2=331.472, df=252, p=.001), and students with children (x^2=28.283, df=18, p=.058). Again, online non-traditional students desire more feedback, details, and feedback more often.

Finally, we investigated whether students felt they were hearing from their online professors too much. This statement was, “I have too much interaction with my online professor.” Since this statement was negatively worded, this question also served as an attention check for the respondents. Students disagreed by a six-to-one ratio. On this question, the only statistically significant result was for married students (x2=16.659, df=6, p=.011).

Table 11. I Have Too Much Interaction with My Online Professor

Q32_16	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1 = Strongly Agree	15	1.5	15	1.5
2 = Agree	24	2.5	39	4.0
3 = Somewhat Agree	31	3.2	70	7.2
4 = Neutral	244	25.1	314	32.3
5 = Somewhat Disagree	127	13.1	441	45.4
6 = Disagree	314	32.3	755	77.7
7 = Strongly Disagree	217	22.3	972	100.0

For validity, our scale had face validity. For reliability, the Cronbach alpha for our 11-item scale was 0.864, well above the 0.70 threshold used for social science research.

CONCLUSION

Unsurprisingly, we learned that online students want/need more interaction. We found that students wanted more detail in their feedback (related to their assignments) and more timely feedback (closer in time to completion). In addition, we found that students perceive they do better with once-a-week feedback from their online professors.

Several factors did not significantly affect any of the eleven questions, including the year in school, major, and employment. As a result, the need for greater interaction for online students is not limited to one college or major. Employment should not be ignored, as most of our sample was employed. As for military service, our survey did not show any significant differences. Future projects could focus on institutions that serve military families. In addition, gender was not examined due to a technical issue. Future projects should investigate whether gender has a role in the desired online feedback.

Our most significant finding is that non-traditional students (older, married, with children) wanted/needed more feedback. Beyond our institution, the broader impact should be that schools that predominantly serve non-traditional students should be aware that these students want/need more frequent and detailed feedback, with an ideal goal of one interaction a week.

This study is not without limitations. The current project did not use random sampling, which would allow for greater generalizations. In addition, this survey only examined one institution, so comparisons might be unwarranted, and differences could be significant based on different faculty, student populations, and support systems. Finally, these results represent a snapshot in time and as such, could not be replicated.

In this project, we did not define “feedback” as the exact method of interaction will vary based on the type of course (lecture or not), level of course (basic or advanced), and subject matter (college and major). A quantitative science course will not have the exact “feedback” as a course in fine arts. Future projects could examine which forms of feedback are preferred in specific courses and majors.

Despite these limitations, this study has demonstrated that students desire more frequent and more detailed interaction and that the contact be closer in time to the assignments to which it refers. Students believe they perform better when they hear from the online instructor once a week, like face-to-face courses. These findings should serve as a call for action for online

professors that more can be done to benefit student learning through more detailed and more timely interactions with students.

REFERENCES

Coman, C., Tiru, L.G., Schmitz, L.M., & Stanciu, C. (2020). Online teaching and learning in higher education during the Coronavirus pandemic: Students' perspectives. *Sustainability*, 12.24, 10367, DOI: 10.2290/su122410367.

Darby, F. (2019). How to be a better online teacher. *Chronicle of Higher Education* (April 17). https://www.chronicle.com/article/how-to-be-a-better-online-teacher/.

Dost, S., Hossain, A., Shehab, M., Abdelwahed, A., & Al-Nusair, L. (2020). Perceptions of medical students towards online teaching during the COVID-19 pandemic: a national cross-sectional survey of 2721 UK medical students. *BMJ Open*, 10.11, DOI: 10.1136/bmjopen-2020-042378.

Kapanjie, D. (2018). Overcoming faculty resistance – or not. *Inside Higher Ed*, (March 14, edited by Mark Lieberman). https://www.insidehighered.com/digital-learning/article/2018/03/14/experts-offer-advice-convincing-faculty-members-teach-online-or

Kelly, R. (2014). Feedback strategies for online courses. *Faculty Focus*, (Feb. 27). https://www.facultyfocus.com/articles/online-education/online-assessment-grading-and-feedback/feedback-strategies-online-courses/

McQuiggan, C.A. (2012). Faculty development for online teaching as a catalyst for change. *Journal of Asynchronous Learning Network*, 16(2), 258. https://files.eric.ed.gov/fulltext/EJ971044.pdf.

Milich, K.M., Fisher, N., & Sobral, G. (2024). Effective public health messaging for university students: lessons learned to increase adherence to safety guidelines during a pandemic. *Humanities and Social Sciences Communications* 11(1), 38.

Moon, P.A. (2017). Coming to campus to teach online. *Inside Higher Ed*, (Oct. 3). https://www.insidehighered.com/views/2017/10/03/why-online-professors-should-be-campus-essay.

Mullikin, J. (2020). Focusing on feedback in distance learning. *Edutopia*, (Nov. 10). https://www.edutopia.org/article/focusing-feedback-distance-learning/.

Quillen, I. (2015). Six signs of a bad online instructor. *U.S. News & World Report* (Jan. 23). https://www.usnews.com/education/online-education/articles/2015/01/23/6-signs-of-a-bad-online-instructor.

Rapanta, C., Botturi, L., Goodyear, P., Guardia, L., & Koole, M. (2020). Online University Teaching During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity. *Postdigital Science and Education*, 2020.2, 923–945. https://doi.org/10.1007/s42438-020-00155-y.

Romanow, D., Cline, M.K., & Napier, N.P. (2024). A Response to COVID: From Traditional to Remote Learning Using a Flipped Classroom Pedagogy and Its Impact on BI Skills Attainment. *Journal of Information Systems Education*, 35(1), 99-111.

Rottmann, S., & Rabidoux, S. (2017). How to provide meaningful feedback online. *Inside Higher Ed*, (Sept. 6). https://www.insidehighered.com/digital-learning/views/2017/09/06/how-provide-meaningful-feedback-online-course.

Sadulski, J. (2022). Providing useful, effective feedback in the online classroom. *American Public University Edge*, (May 19). https://apuedge.com/providing-useful-effective-feedback-in-the-online-classroom/.

Safraz, M., Hussain, G., Shadid, M., Riaz, A., Muavia, M., Fahed, Y.S., Azam, F., & Abdullah, M.T. (2022). Medical Students’ Online Learning Perceptions, Online Learning Readiness, and Learning Outcomes during COVID-19: The Moderating Role of Teacher’s Readiness to Teach Online. *International Journal of Environmental Research and Public Health* 9, 3520.

Smyth, L. (2021). Using Student Feedback to Create Effective Online Learning Experiences. *University Services* (Wiley), (Oct. 21). https://universityservices.wiley.com/how-student-feedback-creates-better-online-learning/

Sohail, M. (2022). Online learning: What next for higher education after COVID-19? *World Economic Forum* (June 30). https://www.weforum.org/agenda/2022/06/online-learning-higher-education-covid-19/.

Tartavulea, C.V., Albu, C.N., Albu, N., Dieaconescu, R.I., & Petre, S. (2020). Online teaching practices and the effectiveness of the educational process in the wake of the Covid-19 pandemic. *Amfiteatru Economic Journal* 22(55), 920-920.

Villasenor, J. (2022). Online college classes can be better than in-person ones. The implications for higher ed are profound. *Brookings TechTank* (Feb. 10). https://www.brookings.edu/blog/techtank/2022/02/10/online-college-classes-can-be-better-than-in-person-ones-the-implications-for-higher-ed-are-profound/.

Warfvinge, P., Löfgreen, J., Andersson, K., Roxå, T., & Åkerman, C. (2022). The rapid transition from campus to online teaching—how are students’ perception of learning experiences affected? *European Journal of English Education*. 47(2):211–229. doi: 10.1080/03043797.2021.1942794.

West, R. (2021). Teacher, are you there? Being “present” in online learning. *Educause Review*, (Feb. 3). https://er.educause.edu/blogs/2021/2/teacher-are-you-there-being-present-in-online-learning.

Williams, T.L., Walker, E., Ludlum, M., Edwards, M., & Gregory, K. (2023). Online learning during the Covid crisis: Student views. *Journal of Higher Education Theory and Practice* 23(2), 161-175.

Wills, L.O. (2024). Virtual high-impact tutoring. *School Administrator* 81(3), 34-37.

Zhang, J., Addae, H.M., Bakeman, M., Boyraz, M., Flaherty, P.T., Habich, M., Johnson, A., Phillips, A., & Schreihans, C. (2020). *e-Journal of Business Education and Scholarship of Teaching*, 14.2 p33-52.

Appendix 1. Text of Survey Questions

Demographic Questions:

Were you enrolled at the (school) during Fall Semester 2020 or are you currently enrolled in the Spring Semester of 2021?
How are you currently classified at (school)?
In which college is your major?
Are you currently employed during this semester?
Are you married?
Please choose the category for your family income as accurately as you can. If you do not know the approximate income, please choose “I do not know.”
What is your current age?
How many children do you have?
Are you a first-generation college student? A first-generation college student is someone whose parents did not graduate from a 4-year college.
Do you personally know someone who has tested positive for COVID-19?
Do you personally know someone who has died from COVID-19 or complications from COVID-19?
How many online courses have you completed prior to Fall 2020?
How many online or extended section courses are you taking in Fall 2020?

Likert Scale Questions:

Interactions between faculty and students are better in online classes than in face-to-face classes.
My online professor should be more present.
My online professor should be more interactive.
My online professor should provide a more balanced workload.
My online professor should be more understanding.
My online professor should give more clear instructions.
My online professor should provide more feedback in terms of quantity.
My online professor should provide more feedback in terms of quality and detail.
My online professor should provide more feedback in a timely fashion.
I would like to hear from my online professor once a week.
I would like to hear from my online professor once a month.
I have too much interaction with my online professor