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A Survey of Instructional Experience of Faculty in Teacher Preparation Programs during the COVID-19 Pandemic

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"In the spring of 2020, educational professionals rushed to suddenly and unexpectedly shift to remote teaching in light of the COVID-19 pandemic" (Boltz, Yadav, Dillman & Robertson, 2021). During this time, "Schools and universities had to quickly adapt to a distance learning model…." (Stevens, Stevens, & Grady, 2021) as "…professors everywhere scrambled to implement some version of their class in an online format" (Baker & Dannatt, 2020). This study provides an analysis of self-reported survey data gathered from college instructors tasked with preparing preservice teachers or developing in-service teachers, who were forced to transition to online delivery of their courses.

BACKGROUND

During the spring of 2020, many college classes transitioned from a face-to-face format to an online setting. In most of these situations, the higher education institution's administration gave course instructors short notice and expected them to complete their courses in a virtual environment that was entirely new to them. Many education professors who had never taught an online class or even aspired to do so, found themselves teaching in this unfamiliar setting. The purpose of this study was to gauge the reaction of college teacher education professors who were required to abruptly change their teaching modality. The self-reported data collected will provide a sense of how professors perceived various aspects of this transition and will provide insights into their beliefs regarding online instruction. These empirical results will provide fodder for discussion and further investigation into why such beliefs are held, how these beliefs might translate into actual results, and perhaps most importantly what steps should be taken to improve the attitudes and performance of reluctant online instructors who may of necessity teach in this mode in the future.

One manifestation of the technological advances of the past several decades has been a slow but steady increase in online instruction. Singh and Thurman (2019) conducted an exhaustive review of the evolving definitions of "online learning" from 1988 to 2018. They found 46 different definitions of "online learning" ranging from a generic "technology-based learning" to more clear definitions that included "learning organized or delivered through web-based technologies" (Singh & Thurman, 2019, p. 295). Additionally, they cite the National Center for Educational Statistics who found that between 2012 and 2016, enrollment in online courses increased by 16% and that 6.3 million students enrolled in online courses in 2018.

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McPherson and Bacow (2015) provided a particularly interesting analysis of the future of online education at the college level. While they discuss a wide range of possible future scenarios, they posit:

While online education is here to stay, so are traditional bricks and mortar colleges and universities…. Having survived such disruptive innovations as the printing press, radio, and television, we suspect that universities will survive this most recent disruption as well. They will adapt and change in response to this new technology as they have adapted and changed in the past to other pressures (McPherson & Bacow, 2015, p. 151).

Interestingly, in some ways the brick-and-mortar universities virtually disappeared during the latter half of the Spring of 2020. The global health emergency created by COVID-19 forced universities worldwide to transform teaching in the middle of a semester with no planning or preparation lead time (Abu Talib et al., 2021; Greenhow & Lewin, 2021; Kulikowski et al., 2022). The impacts of this immediate and radical change were felt throughout the educational sphere and ranged from the planning and delivery of content through the assessment of learning, and everything in between. This immediate and radical change required faculty to shift how lessons were planned, tasks were assigned, social interactions among students and faculty were conducted, and the learning of skills and content adjusted (Cote et al., 2020; Qadir & Al-Fuqaha, 2020). Almost no aspect of teaching at the university level was left untouched by this immediate shift in modality. However, this radical shift can also create opportunities for teaching (Crompton et al., 2021; Dias et al., 2020; Yu et al., 2021).

The opportunity to develop new systems of teaching that utilize and leverage technology to enhance learning is one possible consequence of the efforts and experiences of educators during the spring of 2020. There have already been studies that examined new techniques and technologies of teaching that align with COVID practices of distance learning by students (Alonso & Alonso, 2021; Brunetto et al., 2022; Moore et al., 2021; Mulenga & Marbán, 2020). In addition, there is an enhanced focus on making materials and resources accessible for all learners, as well as the fact that issues of inequity must be considered when planning for distance learning (Bacher-Hicks et al., 2021; Havens, 2020). This was especially true for instructors in colleges of education, where the learners are also future or in-service teachers, and the faculty 'experts' were no longer experts in teaching via this new modality.

PURPOSE

The purpose of this exploratory study was to analyze self-reported survey data gathered from college professors tasked with the preparation of preservice teachers or the development of in-service teachers, who were forced to transition to online delivery of their courses during the spring of 2020. The experiences of these instructors are unprecedented in the history of online teaching and are rife with opportunities for research related to myriad aspects of an online learning structure that has been evolving for decades. Teaching preservice teachers requires flexibility and creativity, as the K-12 educational space is very large and can vary from teaching English at the elementary level to teaching mathematics at the secondary level, and all other content and grade level areas. While the experiences of these educators were by no means ideal, it was necessary, and is replete with research opportunities that would otherwise never have been available. Only time will tell whether these spring 2020 experiences will lead to significant and dramatic changes to the online delivery of instruction or instead be seen as part of the continued evolution of online education. By its very nature, evolution is a slow process, there are times, however, when that process is expedited. In the world of online learning, the Spring of 2020 could be one of those times.

RESEARCH QUESTIONS

Two research questions were used to guide this study:

1. What is the level of agreement indicated by professors of preservice or in-service teachers forced to abruptly switch their teaching modality during the spring of 2020, to a range of survey questions related to various aspects of their instructional experiences?
2. How do professors of preservice or in-service teachers perceive their instructional experiences during the spring of 2020 when they were forced to abruptly switch their teaching modality?

METHOD

A survey was distributed to a variety of listservs using Qualtrics. The use of this software application allowed a reasonably wide distribution of the survey in a short period of time and provided respondents with anonymity of their responses. Seventy-four college educators responded to the survey. The statement below in the introduction to the survey allowed potential respondents to self-determine whether they met the criteria for participation:

> During the spring of 2020, many college classes transitioned from a face-to-face format to an online setting. The purpose of this study is to gather information from individuals teaching Education courses (i.e. courses designed to prepare teachers for initial licensure or to provide enhanced study for practicing teachers) that made the transition from face-to-face to online during the spring 2020 semester.

SAMPLE

In addition to the quantitative and qualitative data described in the next section, demographic information regarding the experience levels and current teaching expectations of respondents was collected. The faculty who responded had a variety of experience in the classroom, but typically fell into two different categories: four-year teaching colleges and four-year research colleges, with the majority being tenure track faculty.

Table 1. *Counts of faculty by institution type*

Type of Institution	Part-time Instructor	Full-time Instructor	Part-time Professor	Assistant Professor	Associate Professor	Full Professor	Total
Two Year institution	1	0	0	0	0	0	1
Four Year Teaching college	4	6	0	7	10	11	38
Four Year Research college	3	1	0	7	13	6	30
Graduate School	0	0	0	0	0	1	1
Other	0	0	0	0	0	1	1
Total	8	7	0	14	23	19	71

There were no part time professors in the sample, and there was only one full professor who taught in a graduate school or two year or other type of institution. The sample collected in

the survey was primarily from four-year institutions. The largest group of faculties was associate professors, which composed 32.4% of the sample. This distribution of faculty was also reflected in the time spent teaching, with the majority of faculty having spent less than 20 years in the classroom.

Table 2. *Counts of faculty by years teaching*

Years teaching	Part-time Instructor	Full-time Instructor	Assistant Professor	Associate Professor	Full Professor	Total	Years teaching
1 to 5	2	3	2	1	0	8	1 to 5
6 to 10	2	1	8	1	0	12	6 to 10
11 to 15	2	3	1	9	4	19	11 to 15
16 to 20	2	0	2	3	5	12	16 to 20
21 to 25	0	0	0	3	6	9	21 to 25
26 to 30	0	0	1	4	0	5	26 to 30
31 to 35	0	0	0	0	0	0	31 to 35
36 to 40	0	0	0	1	1	2	36 to 40
Total	8	7	14	22	16	67	Total

From the sample, it can be observed that the majority of faculty had many years of teaching experience, with very few new faculty members. The discrepancy between the total number of faculty in Table 2 and Table 3 is because several faculties chose to leave their years teaching unselected.

Finally, the participants were also asked to rate themselves on their technology competency. In this sample, the majority of faculty ranked themselves as “reasonably” or “extremely” competent. Although no definition of those terms was given, the faculty considered themselves as individuals who were comfortable with using technology in their professional and personal lives.

Table 3. *Counts of faculty by technology competency*

Self-Reported Technology Competency	Part-time Instructor	Full-time Instructor	Assistant Professor	Associate Professor	Full Professor	Total
Not Competent	0	0	0	0	0	0
Slightly Competent	1	0	0	1	0	2
Somewhat Competent	0	1	1	2	1	5
Reasonably Competent	5	5	8	14	16	48
Extremely Competent	2	1	5	6	2	16
Total	8	7	14	23	19	71

The participants in the study were experienced faculty who, in large numbers, were comfortable with technology, and who had been teaching at a four-year institution for more than six or more years.

THE SURVEY AND DATA

The survey developed for this study included 16 Likert scale items related to various aspects of the unplanned and rapid transition to online learning. Each item includes a five-anchor scale ranging from strongly disagree to strongly agree. The quantitative data for this study is comprised of the participants’ responses to the 16 items on this survey. Additionally, respondents were given an opportunity to include comments on each item. The qualitative

data for this study is comprised of the comments provided by participants regarding each of the 16 items on the survey.

Items for this survey address a range of different aspects of instructor beliefs and were designed such that agreeing with the item indicated that the instructor believed this aspect of the transition to online learning was positive while for other items, agreeing is indicative of a negative belief toward this aspect of online learning. Finally, a small number of items are intended to gather information related to instructors' personal beliefs regarding their own online teaching abilities.

The 16 Likert-type items were:

1. I spent more time preparing to teach each session of the online class than I normally would have spent if the class were face-to-face.
2. I noticed an increase in attendance in my online classes as compared to the face-to-face setting.
3. It was easier for me to identify individual students who were struggling with the content of the course in the online setting.
4. Certain courses are more amenable to an online setting than others.
5. I felt frustrated that I was unable to use certain teaching strategies in my online class.
6. I felt that that students in the online setting were more engaged in learning than is typically the case in a face-to-face classroom.
7. My overall assessment plan was more fair in the online setting than it had been in the face-to-face setting.
8. I felt less confident teaching in an online environment than I typically feel in my face-to-face classroom.
9. There were times during an online class session that I felt as though I was just going through the motions and I wanted the class to end.
10. The move to an online environment forced me to reflect on my teaching practices in a way that will ultimately make me a better teacher.
11. It was easier for me to meet the needs of a diverse population of students than it is in a face-to-face classroom setting.
12. I feel that with more experience my online teaching ability would equal or surpass my current face-to-face teaching ability.
13. I believe that students in my online classes did not learn as much as they would have if they had been in a face-to-face classroom setting.
14. As a result of my online teaching experience, I will revise my previous teaching practices when I return to a face-to-face classroom.
15. My online teaching experience made me realize the importance of teaching in a face-to-face setting in a physical classroom.
16. My online teaching experiences have made me more inclined to teach an online class in the future.

QUANTITATIVE DATA ANALYSIS AND RESULTS

The quantitative research question for this study was: What is the level of agreement indicated by professors of preservice or in-service teachers forced to abruptly switch their teaching modality during the spring of 2020, to a range of survey questions related to various aspects of their instructional experiences?

The results for this research question were attained by assigning the numbers from 1 to 5 to strongly disagree to strongly agree, respectively. Using these values, the mean and standard deviation for each of the 16 survey items was calculated. It should be noted that each item was considered on its own merit. There was no attempt to group items to address

any specific construct. Therefore, questions that were worded negatively used the same coding scheme as those that were worded positively. The means, standard deviations, and number of responses to each item are shown in Table 4.

Table 4. *Means, standard deviations, and N of all responses from the 16 prompts*

Question	Mean	Standard Deviation	N
1. I spent more time preparing to teach each session of the online class than I normally would have spent if the class were face-to-face.	4.05	1.15	74
2. I noticed an increase in attendance in my online classes as compared to the face-to-face setting.	2.21	0.91	72
3. It was easier for me to identify individual students who were struggling with the content of the course in the online setting.	2.47	1.11	74
4. Certain courses are more amenable to an online setting than others.	4.39	0.65	74
5. I felt frustrated that I was unable to use certain teaching strategies in my online class.	4.19	0.8	74
6. I felt that that students in the online setting were more engaged in learning than is typically the case in a face-to-face classroom.	2.18	0.86	74
7. My overall assessment plan was fairer in the online setting than it had been in the face-to-face setting.	2.62	0.84	73
8. I felt less confident teaching in an online environment than I typically feel in my face-to-face classroom.	3.3	1.16	74
9. There were times during an online class session that I felt as though I was just going through the motions, and I wanted the class to end.	2.87	1.32	68
10. The move to an online environment forced me to reflect on my teaching practices in a way that will ultimately make me a better teacher.	3.72	1.08	74
11. It was easier for me to meet the needs of a diverse population of students than it is in a face-to-face classroom setting.	2.32	0.97	72
12. I feel that with more experience my online teaching ability would equal or surpass my current face-to-face teaching ability.	2.5	1.04	74
13. I believe that students in my online classes did not learn as much as they would have if they had been in a face-to-face classroom setting.	3.78	1.14	74
14. As a result of my online teaching experience, I will revise my previous teaching practices when I return to a face-to-face classroom.	3.53	1.01	73
15. My online teaching experience made me realize the importance of teaching in a face-to-face setting in a physical classroom.	4.14	0.81	74
16. My online teaching experiences have made me more inclined to teach an online class in the future.	2.88	1.14	74

QUALITATIVE DATA ANALYSIS AND RESULTS

The qualitative research question for this study was: How do professors of preservice or in-service teachers perceive their instructional experiences during the spring of 2020 when they were forced to abruptly switch their teaching modality? The results for this research question were based on a qualitative analysis of the open-ended comments provided by participants to the items on the survey. The intention of these qualitative results is to provide a flavour for the various beliefs expressed by participants and to add contextual background to the quantitative data and results.

ITEMS INDICATING STRONG AGREEMENT

Four survey items reported a mean greater than 4. Item #5, I felt frustrated that I was unable to use certain teaching strategies in my online class, resulted in a mean of 4.19 (S. D. = 0.80, N = 74). One respondent provided strong agreement stating, "My forte has always been in the presentation of course materials and in personal interaction with students…. Online course delivery stifles this interaction almost completely." Another added, "I had to replace hands-on activities and experiments with online activities that did not provide the same learning experience," while a third said, "I typically take students into schools to teach lessons, and this was not possible this term." Not everyone agreed as witnessed by the following comments "… I figured out new and different ways to address it and … it was ok" and "Even labs can be done virtually."

Item #4, Certain courses are more amenable to an online setting than others, had a mean response of 4.39 (S. D. = 0.65, N = 74), the highest of any item. Comments contributing to this mean include, "Teacher education classes in which teaching skills and performance are a major component of the course should not be offered online" and "If I had to teach the entire class online, it would be extremely difficult because of the hands-on experiences that are required." Another respondent clarified the distinction by stating, "Field experience is NOT adaptable. Technology course and curriculum course were," while another indicated, "I actually was surprised by how well an online methods course went."

Item #1, I spent more time preparing to teach each session of the online class than I normally would have spent if the class were face-to-face, reported a mean of 4.05 (S. D. = 1.15, N = 74). One respondent indicating agreement with this item stated, "It definitely took me at least 3 times as long prepare [sic] and work with students…." Another said, "The actual preparation for each class session only increased a little. The time spent on the course increased due to all the specials needs of the students (due to the pandemic)." A third respondent, however, was not as adamant about the increased time simply saying, "Some less, some more."

Item #15, My online teaching experience made me realize the importance of teaching in a face-to-face setting in a physical classroom, reported a mean score of 4.14 (S. D. = 0.81, N = 74). Numerous comments supported this statement including, "I think I was pretty certain about the inequities that would be amplified and newly emerge when students were sent home/online, so the physical setting was already very important to me (and my students)," and "Being with people cannot be duplicated online." Another comment that deserves consideration is, "The only advantage we can offer over the exclusively online universities is our face-to-face interaction with students in a physical classroom."

ITEMS INDICATING DISAGREEMENT

None of the items reported a mean less than 2. There were four items with means between 2.18 and 2.47. Item #2, I noticed an increase in attendance in my online classes as compared to the face-to-face setting, garnered the second lowest mean of any item at 2.21 (S. D. = 0.91, N = 72). Some comments suggested that when some respondents disagreed with this

statement, it did not necessarily mean attendance had decreased. One respondent indicated that, "Attendance in person was usually 100%, online it was also nearly 100%." While others specifically stated that attendance stayed, the "same." The following comment suggested a decrease in attendance, "Attendance dropped in two of my mathematics education courses." Another comment stated, "There was really no excuse to not be in class, since everyone was supposed to be home!"

Item #6, I felt that students in the online setting were more engaged in learning than is typically the case in a face-to-face classroom, reported a mean of 2.18 (S. D. = 0.86, N = 74), the lowest of any item. Despite this, however, one respondent stated, "Thanks to Zoom breakout rooms, I was able to engage all students more than in a regular classroom," while another added, "I think the students were about as engaged as they would have been in the face-to-face classroom." The following two comments, however, were in line with the low mean, "It was nearly impossible to hold student attention and receive the immediate feedback necessary to conduct class" and "Students commented that they preferred face-to-face."

Item #11, It was easier for me to meet the needs of a diverse population of students than it is in a face-to-face classroom setting, had a mean of 2.32 (S. D. = 0.97, N = 72). Comments aligned with this low mean include, "It was extremely difficult to collect timely formative assessment information and make quick on the spot instructional decisions to meet the needs of all my students …." and "The students who struggled the most were the students who did not attend. On campus, I could make contact through classmates and support students more readily." A possibly time-consuming solution was found by one respondent, "I ended up doing one-on-one zoom sessions with every student in the class." While another found that texting was highly beneficial, "I was also amazed at the number of students who texted me…. It was easy to respond, and I realized how fluid this was for the students."

Item #3 stated, it was easier for me to identify individual students who were struggling with the content of the course in the online setting. The mean for this item was 2.47 (S. D. = 1.11, N = 74). One respondent stated, "Can't assess mathematical understanding without close observation of students." and another said, "about the same." The comments of others suggested that the difficulties instructors observed were sometimes related to the new online environment rather than with the course content. One stated, "It was difficult to get some students to respond to queries and to utilize feedback." while another said, "Some students' struggles in the online transition was not because they were struggling with the content per se, but rather because of other uncontrollable factors. But it was also difficult to discern this online since I could not "see" the students or hear what they were thinking more informally." Another commented, "Many students did not respond to my attempts to contact them and as a result, performed poorly (or not at all) on assignments or experienced technical difficulties."

ITEMS WITH NEUTRAL MEANS

Numerous questions on the survey reported means no more than a half point from the mean of the scale. The first of these was Item #7, My overall assessment plan was fairer in the online setting than it had been in the face-to-face setting, with a mean of 2.62 (S. D. = 0.84, N = 73). Despite the relative neutrality of this mean, the comments represent divergent thoughts. On one side were comments such as "My assessments were much more lenient…." and "I felt I had to reduce my expectations, including quality of work, deadlines, and grading." Another added, "The grades were higher than normal." Other comments, however, indicate a more stable meaning of grades, "Our courses are completely performance based" and "I was more flexible in terms of deadline, but criteria for assessment remained the same."

Item #8, I felt less confident teaching in an online environment than I typically feel in my face-to-face classroom, reported a mean of 3.30 (S. D. = 1.16, N = 74). Comments included, "I have taught instructional technology so was able to shift practice without major issues" and "First time was a little stressful, but it all smoothed out." Another stated, "Online

education was uncomfortable. I am not certain I will continue to teach if we have to continue with online instruction." Another enlightening comment was, "We discuss a lot of very personal situations, which I was not willing to do online…."

Item #9, There were times during an online class session that I felt as though I was just going through the motions, and I wanted the class to end, reported a mean of 2.87 (S. D. = 1.32, N = 68). The standard deviation for this item was higher than any other item at 1.32 and there were fairly strong comments on both sides. On one hand a respondent said, "I made the lessons interactive and meaningful so that would not be the case" and another added, "I don't teach linearly with a PowerPoint either online or ftf [face to face]. I try to move the thinking to the students." While on the other hand, comments included, "Especially when students did not want to participate and had to be coaxed" and "online instruction is uncomfortable because I can't easily gather visual and auditory clues …." Another comment, though there was no confirmation as to whether the respondent actually implemented this strategy was, "Then I'd just end class :)."

Item #16, my online teaching experiences have made me more inclined to teach an online class in the future, had a mean of 2.88 (S. D. = 1.14, N = 74). On the upside one respondent stated "This experience has, at least, allowed me to consider teaching online courses…." And another added "I learned that I can do effective teaching both ways, even though my preference would be to teach in-person." A third said, "I'd do this again." On the other end of the spectrum, comments included "The more I teach online the more I am convinced that computers, though a good tool, will never replace an effective--or even average--F2F teacher" and "It actually reinforced my opinion that I would not volunteer to teach in an online setting." While another was even more direct, "I never want to teach another online course."

Item #12, I feel that with more experience my online teaching ability would equal or surpass my current face-to-face teaching ability, reported a mean of 2.50 (S. D. = 1.04, N = 74). Unfortunately, due to a technological glitch comment regarding this item could not be accessed.

THREE PARTICULARLY CRITICAL ITEMS

The qualitative results section will conclude with three particularly critical items. These are Item #13, I believe that students in my online classes did not learn as much as they would have if they had been in a face-to-face classroom setting; Item #14, As a result of my online teaching experience, I will revise my previous teaching practices when I return to a face-to-face classroom; and, Item #10, The move to an online environment forced me to reflect on my teaching practices in a way that will ultimately make me a better teacher.

Item #13 reported a mean of 3.78 (S. D. = 1.14, N = 74), fifth highest on the survey. This indicates that the average response is more than three quarters of the way from neutral to agree. Comments strongly aligning with support of item #13 were expressed by several respondents. One stated, "This Spring 2020, … my courses ended up "covering" less than half the material I would normally do with students in a face-to-face course," while another added, "This was obvious from the quality of their products for their final projects compared to student work in the past." A third indicated that, "It was not possible to compress all of my lessons, lectures, and labs into an online format. Labs were removed entirely due to concerns for safety," while yet another indicated that, "There was less interaction among the students since they were not together." Another comment, however, expressed a different sentiment, "The shift to online enabled me to focus heavily on an area that I've never been able to focus on as well before. My students report that they learned a lot about teaching but also about mathematics. I hope I can continue this focus going forward." A final comment raises a critical question, "For a first semester, it seems logical that the learning should be less. I would be more interested if that persisted."

FINISHING ON A POSITIVE NOTE

As mentioned in the previous section, the two items remaining to be discussed are Items #10 and #14. Item #10 had a mean of 3.72 (S. D. = 1.08, N = 74) while Item #14 reported a mean of 3.53 (S. D. = 1.01, N = 73), indicating reasonably strong support for these statements.

Comments on Item #10 that suggest reflection leading to better future teaching include, "Made me reflect on what's essential for students to learn in each course" and "Where I did spend more time was on written documents for *assignments…. I gave more detail." Not everyone agreed as witnessed by the following comment, "Perhaps a different teacher, but not a better teacher. Teaching is an art that utilizes visual and auditory cues that are simply not transmittable online." A final comment, "I do worry about how I will teach well in the fall. I will be teaching general education math courses, and if they are online, my best teaching practices will not be possible" deviates from the actual item but instead focuses on how the next group of students can be best served.

Comments on Item #14 that suggest revisions to previous teaching practices include, "I will bring in some of the technology I discovered, like FlipGrid and Padlet" and "I will continue to schedule one-on-one zoom conferences to check in with students…." as well as "content focus will change, and my written assignment guidelines will be clearer." Not everyone indicated that they would revise their teaching practices, "I will return to business as usual. Online education is an unpleasant experience…." Another indicated that, "Good teachers are always honing their practice." While a final respondent simply said, "I'm retiring."

DISCUSSION

While the results reported above speak for themselves, there are two areas the authors feel are worthy of particular scrutiny: (a) the general belief that students learned less than they would have if the course remained face-to-face; and, (b) the impact of spring 2020 experiences on the future of higher education.

LEVEL OF ACHIEVEMENT

Item #13, I believe that students in my online classes did not learn as much as they would have if they had been in a face-to-face classroom setting, is a critically important item. The support for this item is the most concerning aspect of this survey. While few studies have been completed specifically measuring the level of student learning in college during the spring of 2020, numerous studies support the possibility of decreased learning. Means and Neisler (2021) sampled 1008 post-secondary students, most of whom were attending a four-year college. They found that 79% indicated that "staying motivated to do well in the course" was either a major problem (42%) or minor problem (37%) with only 20% indicating this was not a problem. While Fitzgerald and Konrad (2021) indicated that nursing students reported experiencing anxiety and difficulty concentrating that had "the potential to "sidetrack students in their academic studies."

This potential for decreased achievement must be considered in light of some of the comments offered on item #7 regarding assessment. While the mean of item #7 was close to neutral, there were several comments indicating that grades may not reflect the same level of achievement as in the past. "My assessments were much more lenient…," "I felt I had to reduce my expectations, including quality of work, deadlines, and grading." and "The grades were higher than normal." Educators at all levels must be extremely careful interpreting grades earned during the spring of 2020. While many of these grades will be accurate others may be not be. Therefore, instructors at all levels should be prepared to provide appropriate remedial instruction to students, regardless of their previous grades, while simultaneously delivering quality instruction on new content.

IMPACT ON THE FUTURE

There is much to be gleaned from the efforts of professors during the spring of 2020. The comments in response to items #10 and #14 in this study are evidence of this. Other studies conducted in the same time frame suggest similar results. Damast, Cohen, and Martinez (2021) state, "…this remote learning experience has permanently altered how we think about teaching and learning, with blended and remote options likely to be embedded and adapted into curricula for years to come." While Mukhopadhyay et. al. (2020) suggest that "If the forced adoption of virtual technologies in this era spurs a wider embrace of these tools in the long-term, we would view this as an unanticipated but welcome consequence." Additionally, Baker and Dannatt (2020) indicate that "Overall, the COVID-induced transition to online instruction was a learning experience for educators at all levels."

There are strong reasons for continuing face-to-face teaching as an important component of the college experience. There is also much that can be gained by incorporating successful strategies learned from remote teaching during the spring of 2020 to improve our face-to-face teaching and/or to develop hybrid teaching models that incorporate the best aspects of both modalities.

CONCLUSION

Being a professor is noble profession that even in the best of times demands a strong commitment and work ethic. Never has the dedication and resourcefulness of professors been more evident than it was in the spring of 2020 and the 2020-2021 academic year that followed. While many feel that they did not perform their "best teaching" during this period, it is critical to remind them that their efforts were highly valued. Taken cumulatively, these endeavours will improve both face-to-face and remote teaching at the college level.

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