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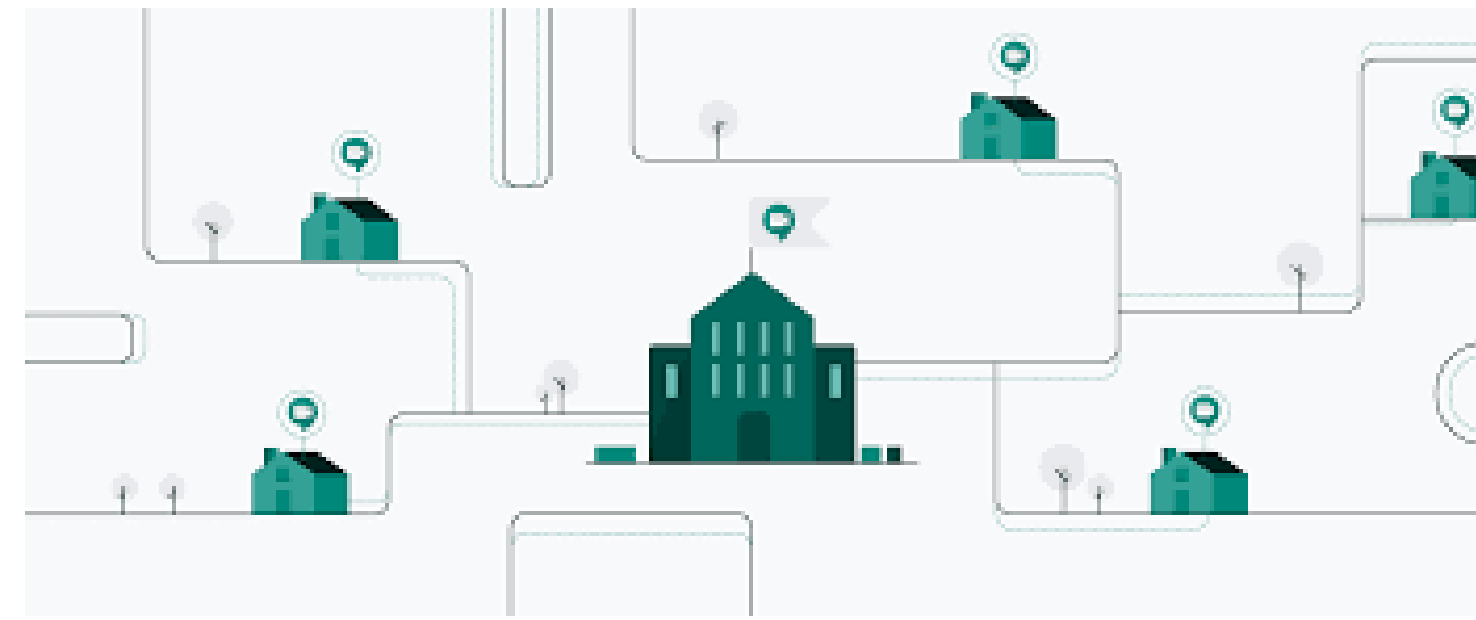
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Covid-19 Impact on Radiology Students' Distance Learning



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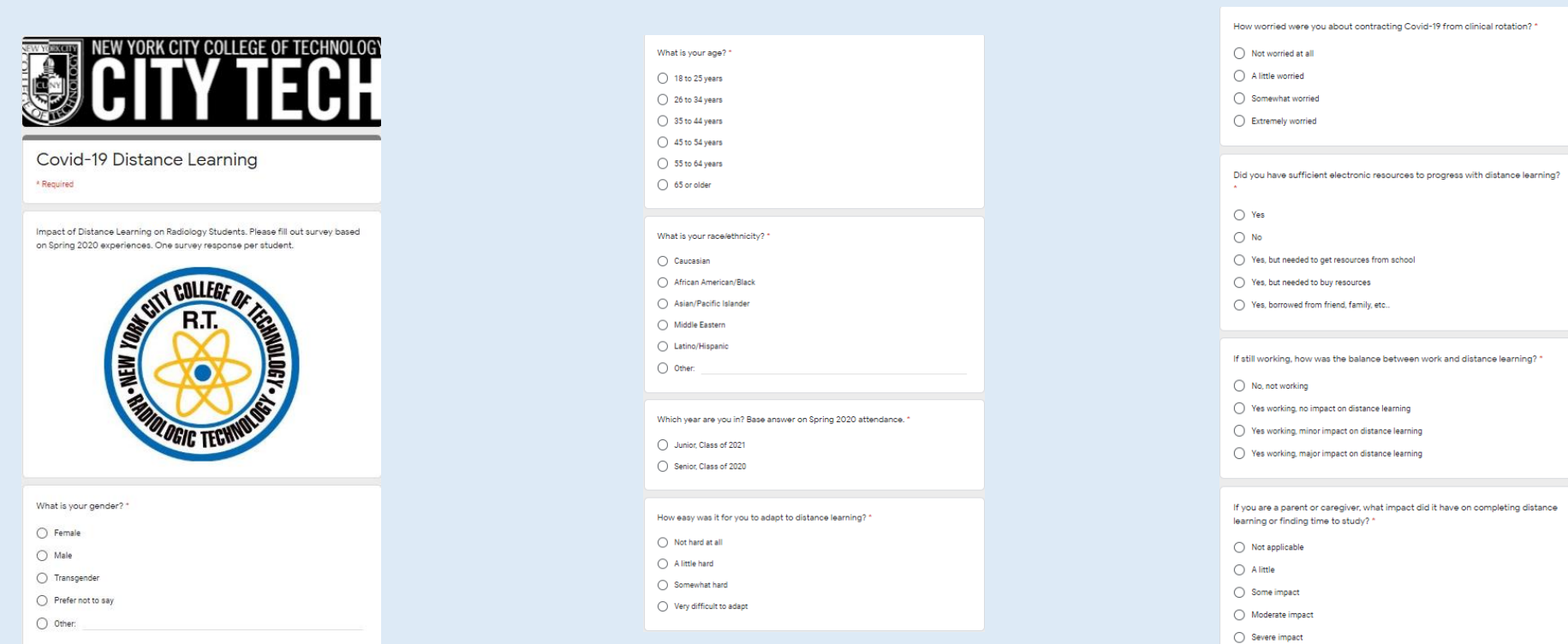
Introduction

In March 2020, COVID-19 cases are increasing worldwide, and New York City's first case creates headlines. For the Radiologic Technology students at New York City College of Technology (NYCCT), it was the beginning of how the medical education, the acquiring knowledge and psychological/motoric skills of radiological sciences (Masic, 2008), would change not just their lives as students but as future radiographers.

The Radiology program is divided into trimesters for the two-year program. The first year is heavily with classroom work three times a week and clinical twice a week in the second semester. First year students will be introduced to the science of Radiologic Technology and the different components to creating an acceptable x-ray. The third semester of each year, is a five day a week summer clinical rotation for 7 and 5 weeks, respectively. The second year consists of three days of clinical and two days of classroom work. In this phase, emphasis is placed on clinical competency and preparation for the American Registry of Radiologic Technology exam, following their final summer clinical rotation.

What happens when Covid-19 disrupts the didactic and clinical education and keeps students from practicing their acquired skills, either in open laboratory or clinical rotations?

Screenshots of the online survey that was distributed by email to both classes of 2020 and 2021.



Methodology

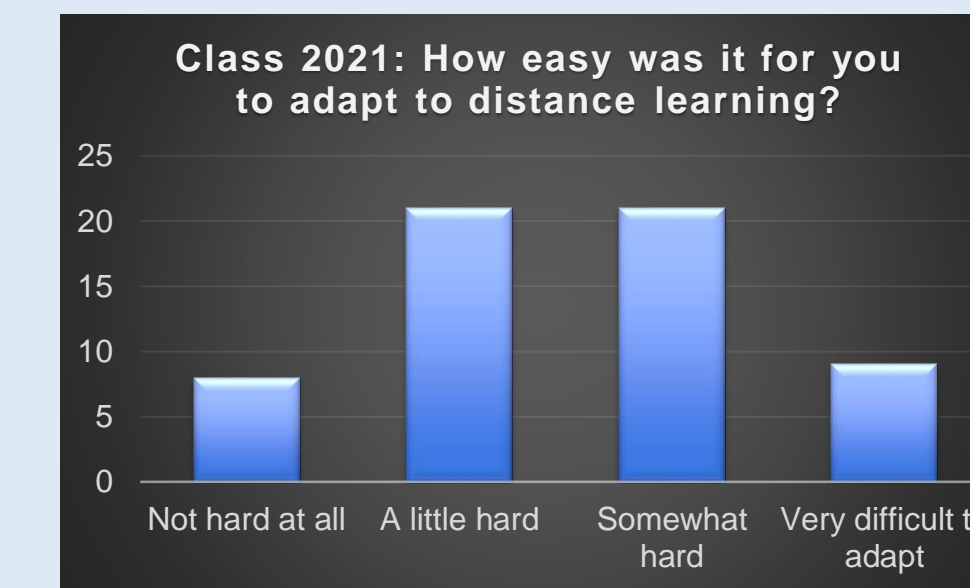
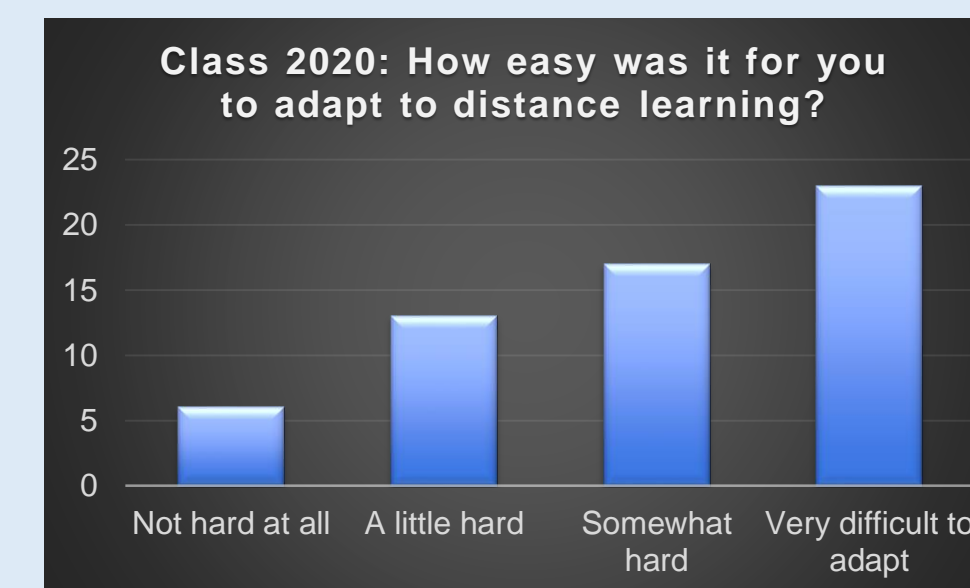
Radiological students were emailed an online survey created on Google Forms, after the conclusions of the Spring 2020 semester. The survey uses a Likert type scale to measure their concerns and thoughts with distance learning. Factors, such as being a caregiver, working status and having sufficient access to technology were assessed. Participation is tabulated at 100% for class of 2020 (59 students) and 92% for class of 2021 (63 students). Numerical data is exported to Microsoft Excel for analysis and chart formation.

Abstract

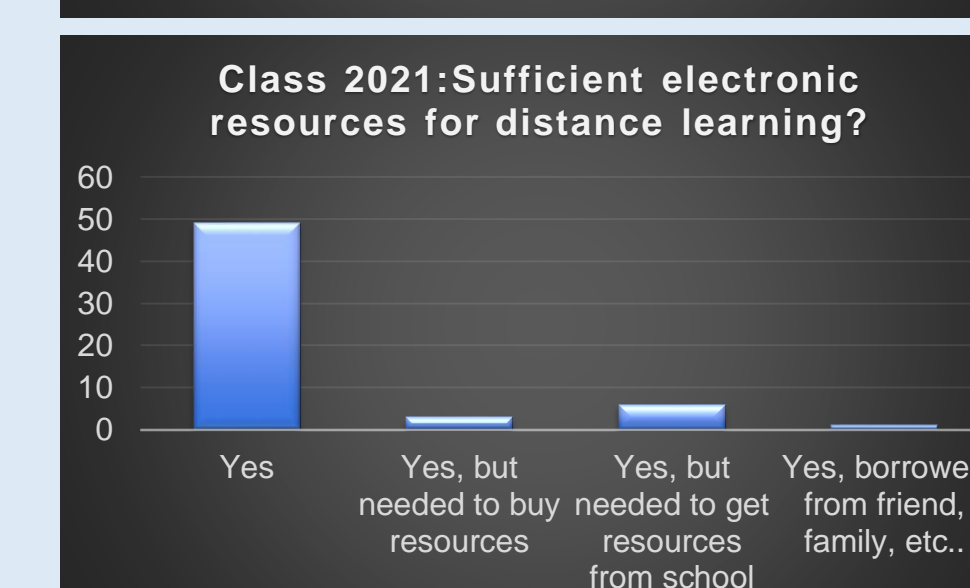
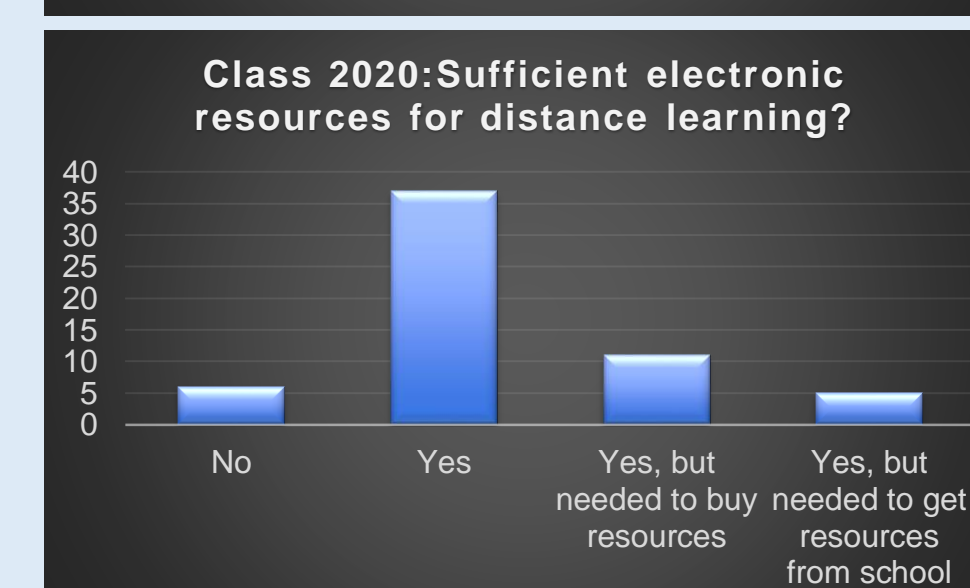
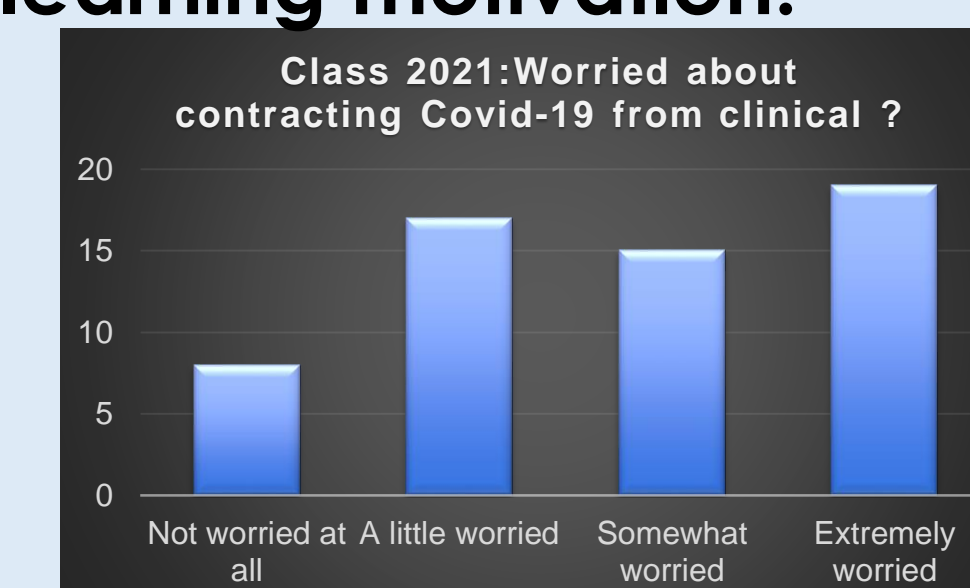
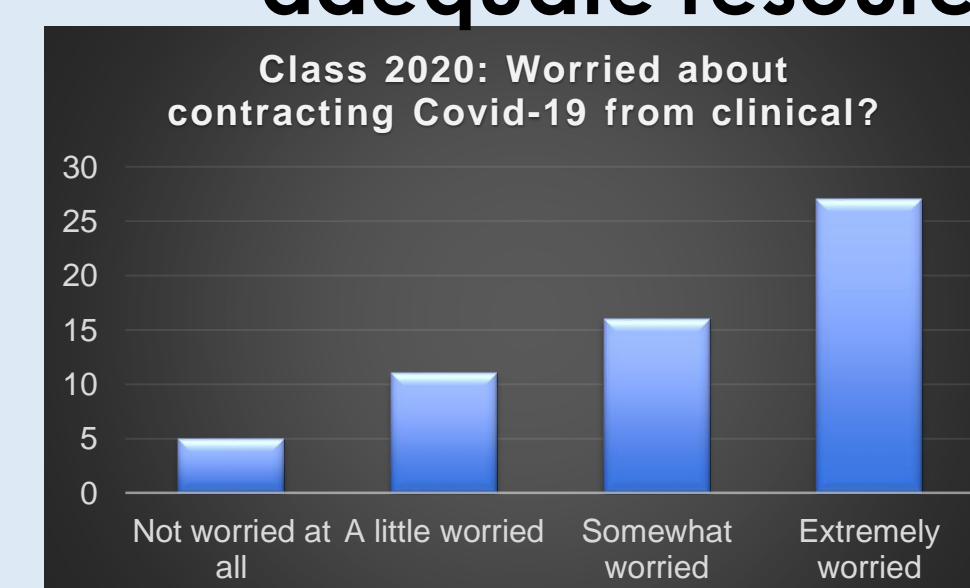
Distance learning (DL) is a teaching tool that offers education to students remotely in various locations (Ruiz, 2006). The increase in distance learning education is evident in all types of educational programs including those in Radiologic Sciences. DL education programs are expected to comply with all standards just as traditional programs are (Aaron, 2015). With a traditional class setting, knowledge is taught at a given time and day, which is structured in terms of course development and attendance. It does not factor in the domestic and familial responsibilities of the students outside the classroom walls. What happens when a pandemic creates a widespread stoppage of human movement and changes in-classroom teaching to distance learning. How do students adapt? Can they adapt? How do educators teach when the classroom shrinks to the size of a computer monitor? What happens to the clinical, hands-on portion of the education? Many questions arise when a traditional university classroom setting moves abruptly to distance learning. With the distribution of surveys, we hope to analyze how students coped with DL, its evolution and efficiency of course material distribution over the remaining Spring 2020 semester.

Results

The focus will be on the two classes of students in session during March 2020. The age ranges vary greatly between the two classes, which could indicate different factors that impact student motivation (Burrow, 2016).

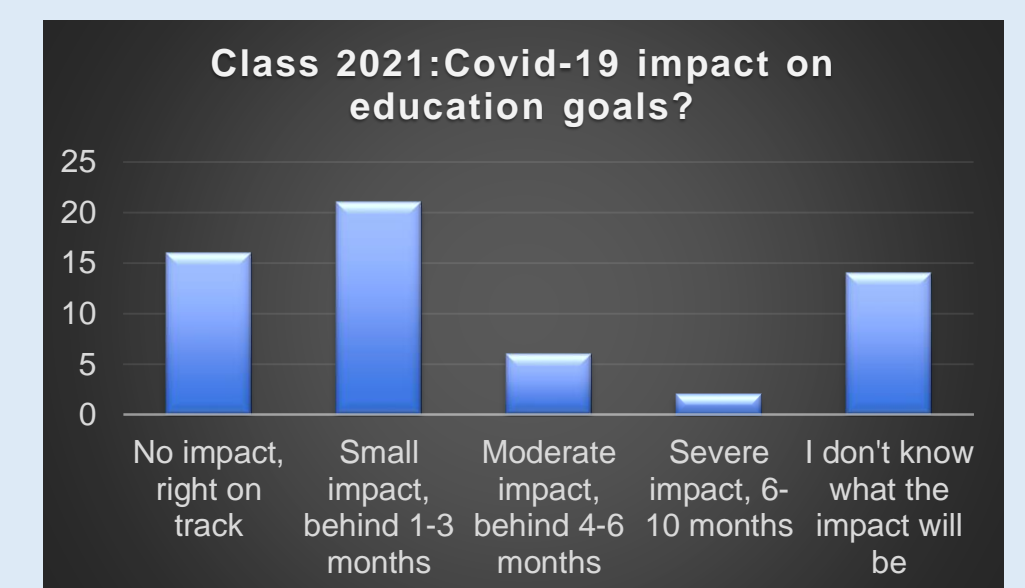
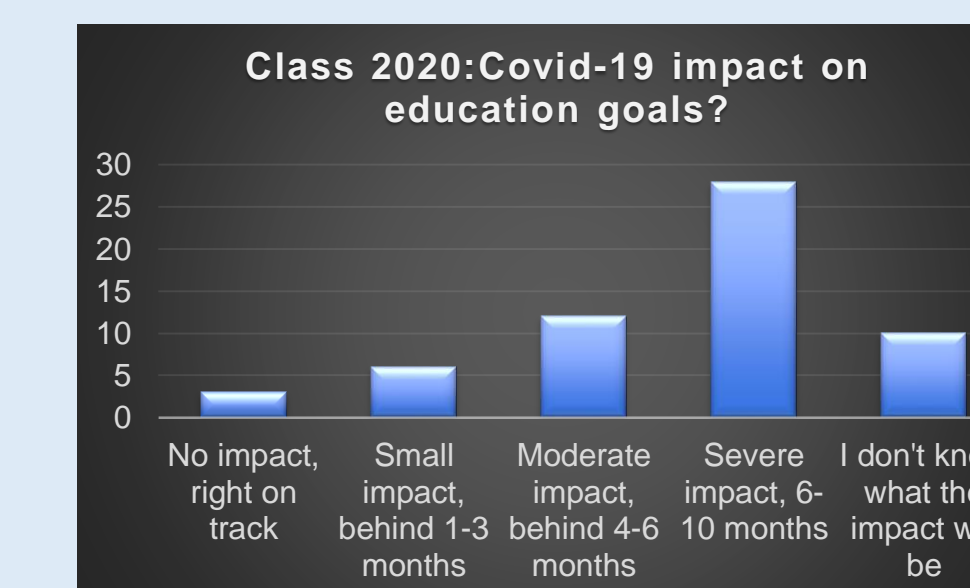
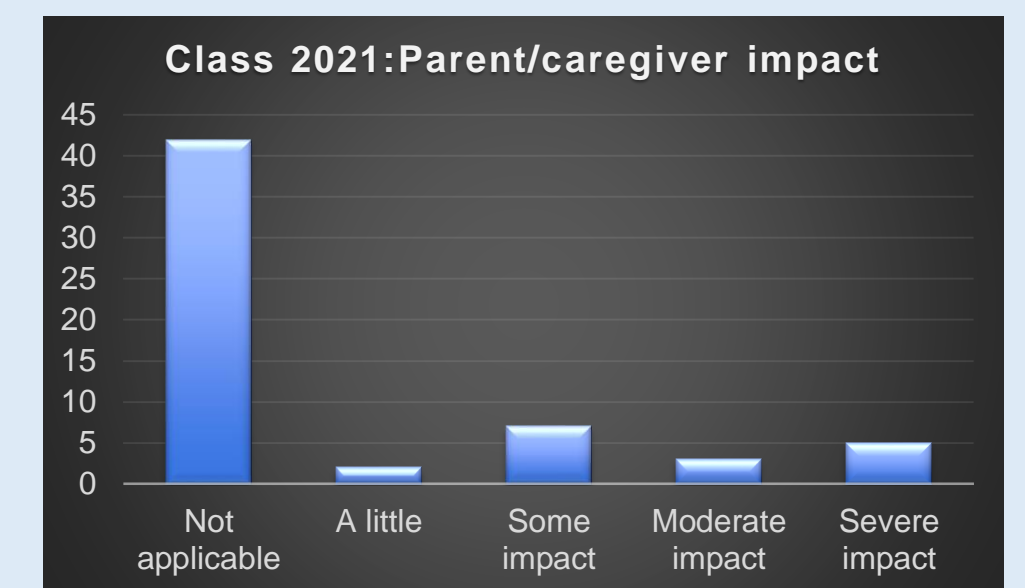
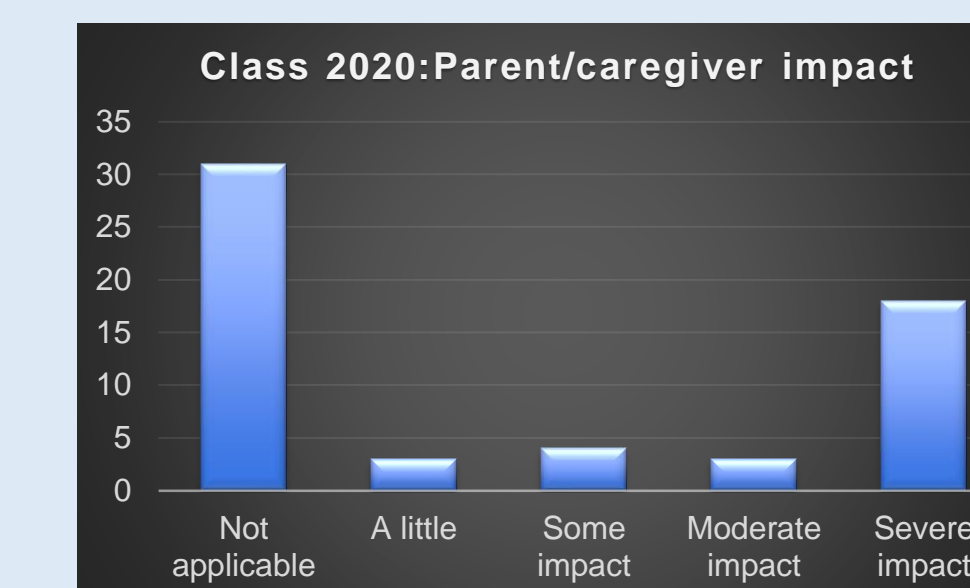
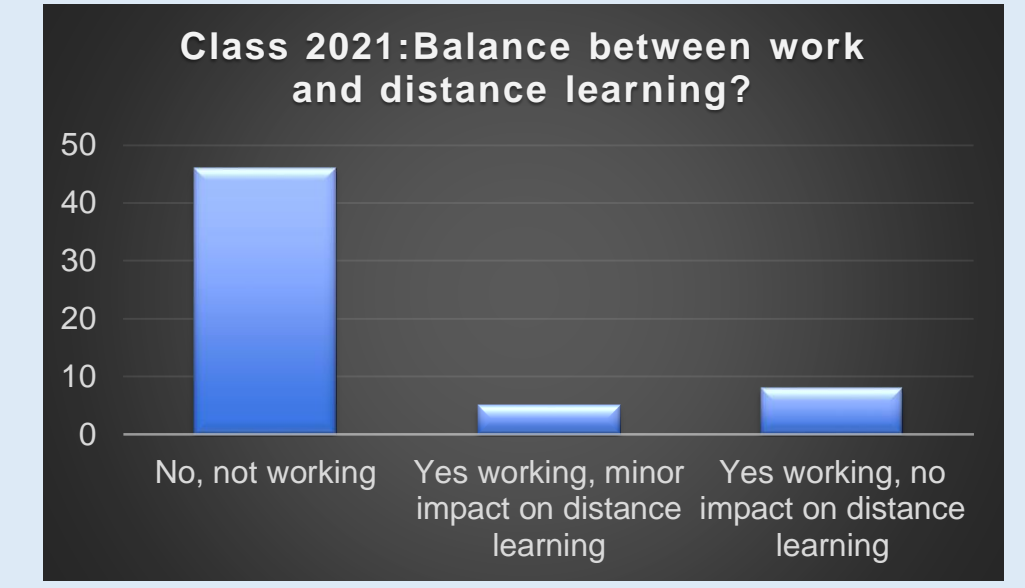
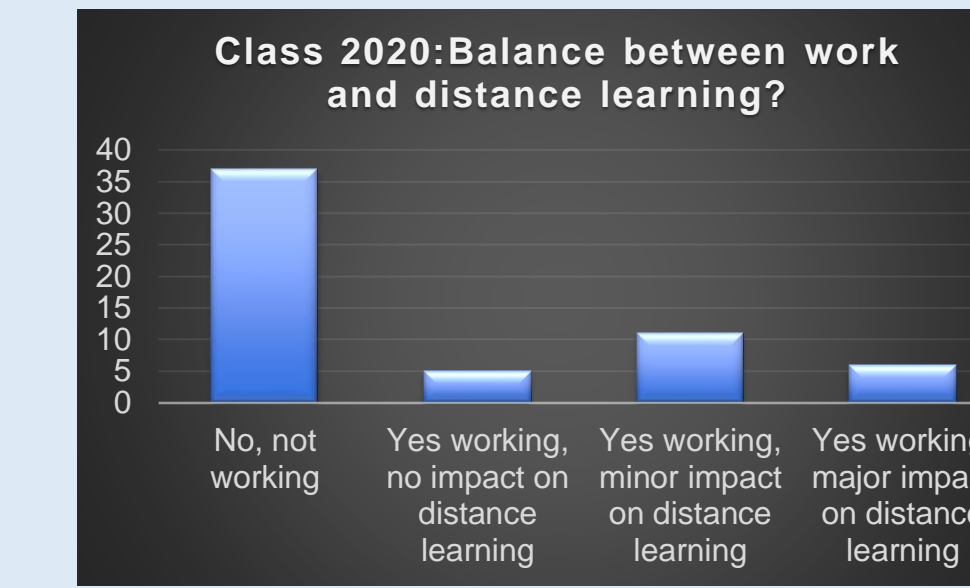


Each class of students faced unique challenges, age and ability to adapt varied greatly. The fear of contracting the virus as well as having adequate resources will impact learning motivation.



Results continued

Most students were not working during this semester or were a parent or caregiver. Those that did work or had caregiver roles, felt the impact with balancing DL with these factors. According to the survey data, Covid-19 had a more severe impact on the class of 2020 than the class of 2021.



Surveys will continue to be distributed in the Fall 2020 semester to gauge how the Class of 2021 is handling learning under the umbrella of Covid-19. The Class of 2020 will only be in clinic rotation and have no didactic learning to complete. To supplement data, the Class of 2022 will be surveyed, and their experiences will reflect the new teaching models within the Radiological Technology Department.

Conclusion

The goal of the Radiology program is to provide a quality education that prepares students to become members of the radiography community. The mode of curriculum delivery does not change the goal and the quality of the program is maintained (Aaron, 2015). When the classroom is your living room, it impacts how knowledge is acquired and retained. Additional surveys will be sent to the class of 2020 and 2021, plus the incoming class of 2022 to assess how these students are adapting for both didactic classes and clinical rotations.

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