

INTRODUCTION

- The COVID-19 pandemic caused colleges to abruptly change their instructional modes.
- Due to sudden disruptions from in-person learning to hybrid and online formats, learners needed to quickly change their learning styles.
- Across the US, many students had difficulties transitioning from a time of normalcy to unprecedented circumstances (Johnson, 2020).
- The extent of the disruptions to learning for SUNY Geneseo students is not fully known; an understanding of student experiences in transitioning back to in-person learning is also needed.
- The purpose of our research is to examine how students viewed their academic experiences during the pandemic semesters from Spring 2020 to Spring 2021, compared to Fall 2021.

METHODS

- We created a voluntary and anonymous survey including questions regarding the disruptions that were brought about by the pandemic.
- Our survey was approved by SUNY Geneseo's IRB
- To summarize, we asked students to compare their perceptions of course difficulty, ways they received help, and academic confidence between Spring 2020 and Spring 2021, and Fall 2021.
- We sent the first survey to SUNY Geneseo Biology majors and related minors (Fig. 1 and 3); a second survey was recently sent out to all majors (Fig. 2).
- Using R Programming, we analyzed student responses using Chi-Squared and Fisher's Exact tests of independence.
- We visualized the relationships between responses of different questions using alluvial plots

ACKNOWLEDGEMENTS & REFERENCES

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RESULTS

The Amount of Semesters at SUNY Geneseo Does Not Correlate to Biology Students Perceptions of Course

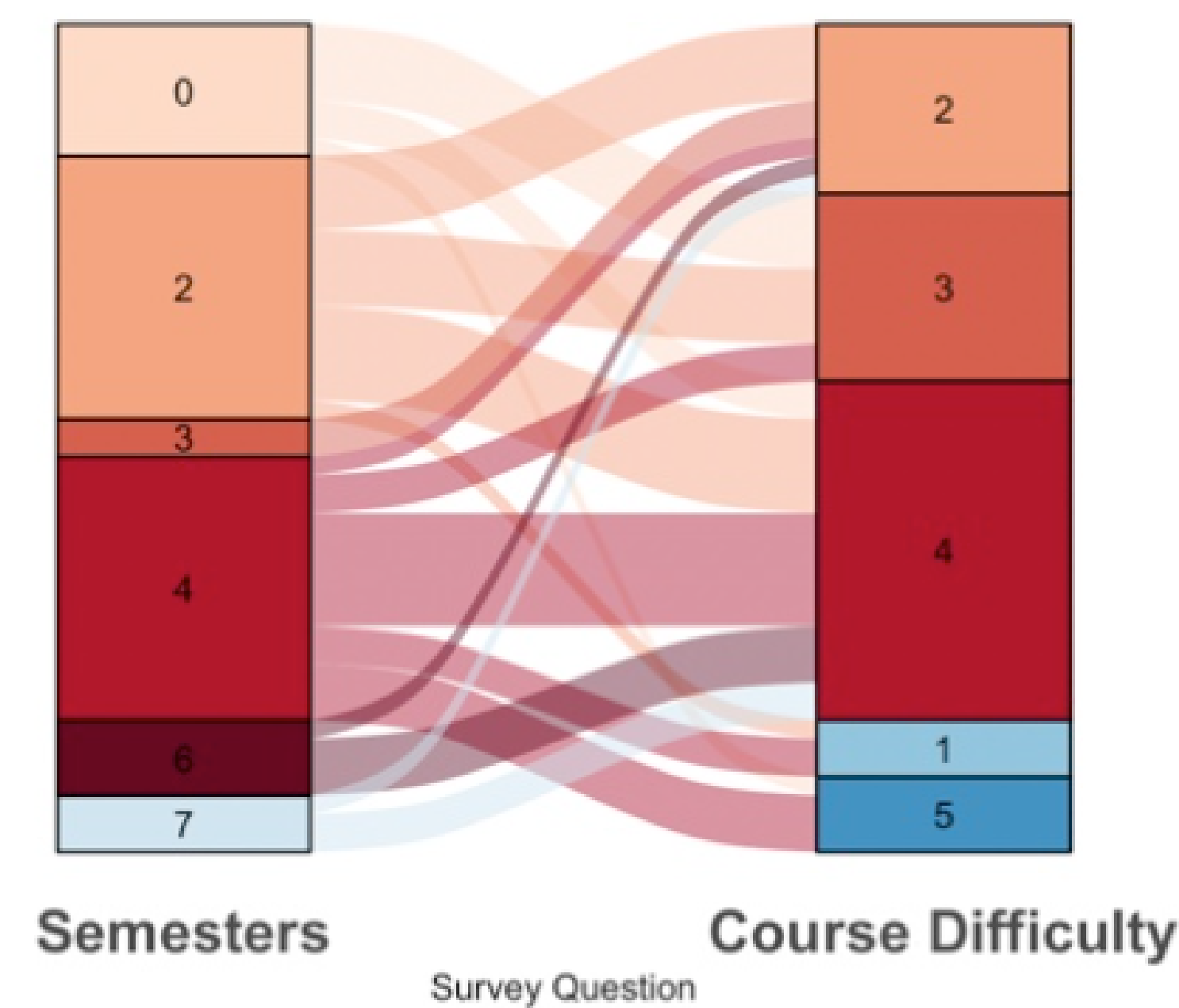


Figure 1. We asked biology students to report the number of semesters they've spent at SUNY Geneseo; a separate question was asked to rate course difficulty during the online/hybrid semesters (Spring 2020/2021). The student responses for both questions are represented by the columns, and the flowing lines between represent how each student answered both questions. A thicker line indicates a higher amount of students who chose the same set of responses.

Biology Students Perceive Courses as Difficult yet Remain Academically Confident

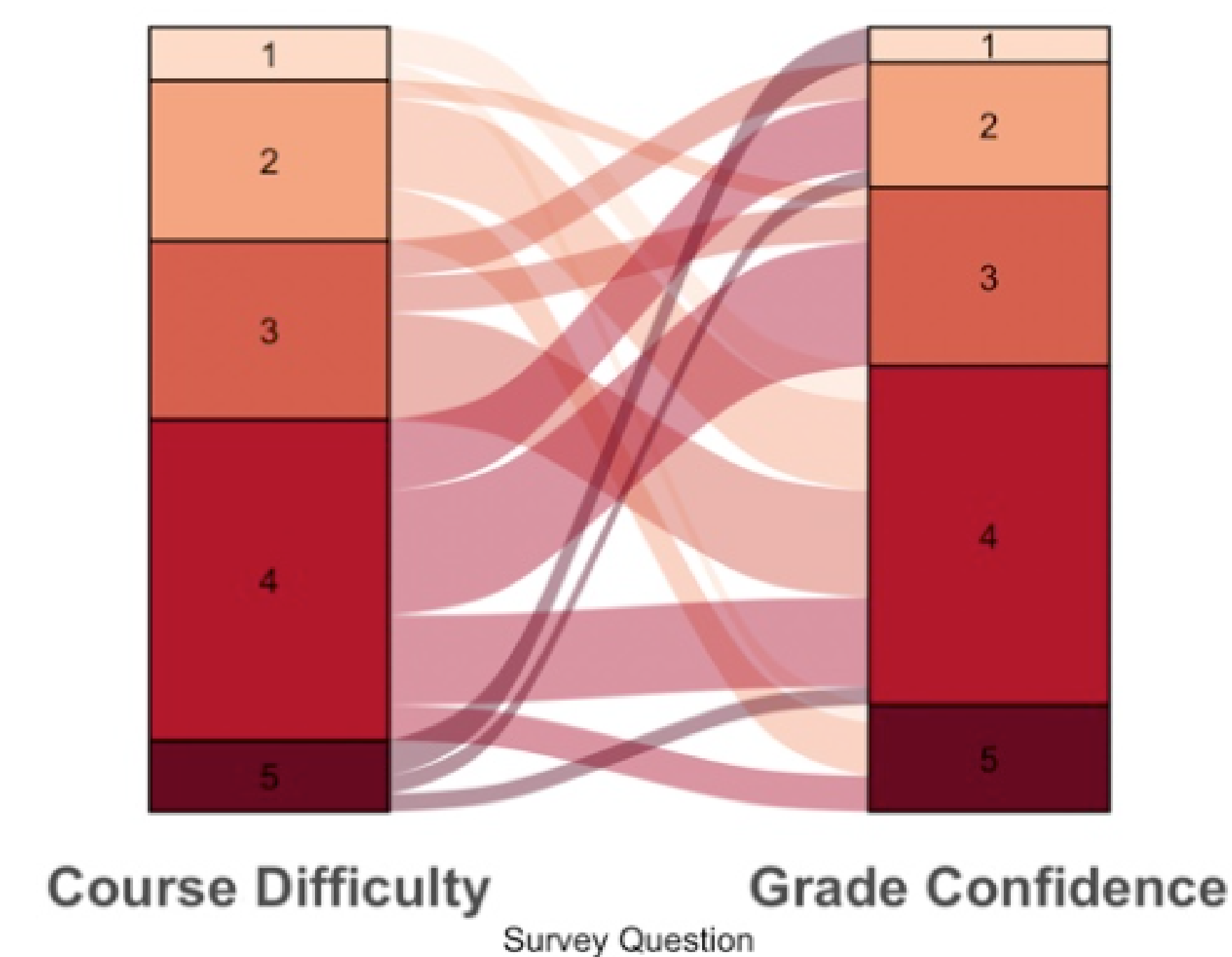


Figure 3. We asked biology students to rate their perceptions on course difficulty and grade confidence during the online/hybrid semesters. (Spring 2020-2021). The student responses for both questions are represented by the columns, and the flowing lines between represent how each student answered both questions. A thicker line indicates a higher amount of students who chose the same set of responses.

The Amount of Semesters at SUNY Geneseo Does Not Correlate to Students Perceptions of Course Difficulty

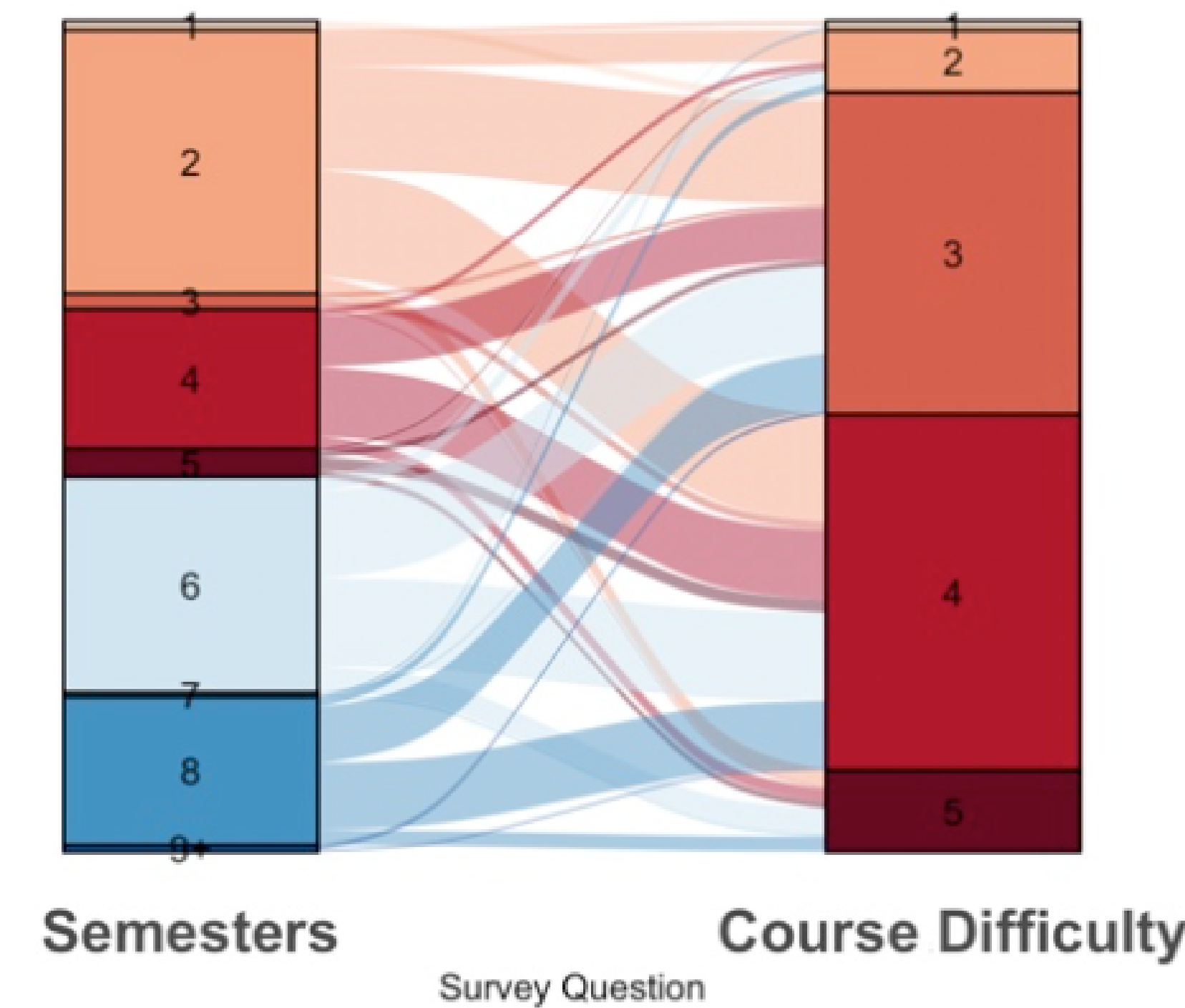


Figure 2. We asked SUNY Geneseo students to report the number of semesters they've spent at SUNY Geneseo; a separate question was asked to rate course difficulty during the first in-person semester following the online/hybrid semesters (Fall 2021). The student responses for both questions are represented by the columns, and the flowing lines between represent how each student answered both questions. A thicker line indicates a higher amount of students who chose the same set of responses.

Course Style:

- 75% of biology students prefer in-person learning, in comparison to hybrid and online formats.
- A majority of biology students reported that courses are more difficult in-person, in comparison to online or hybrid courses.

Academic Confidence:

- Most biology students experienced an increase in academic confidence during in-person classes.

Learning Experience:

- A majority of biology students had a poor learning experience during the COVID-19 pandemic (Spring 2020-Spring 2021)

Course Difficulty:

- From the Spring 2020-Spring 2021 analysis, we compared the amount of semesters compared to course difficulty. We found that there is no apparent trend with this data, however this sample was not representative of the SUNY Geneseo campus as a whole.
- From the Fall 2021 analysis, the amount of semesters was compared to course difficulty as well. This data did represent the entire SUNY Geneseo campus, as the majors which responded are proportional to those offered. Again, we did not find an apparent trend with this data.
- Biology students did perceive courses to be more difficult from Spring 2020 to Spring 2021

Receiving Help:

- There was no consensus on a preferred way of help between biology students when asked to choose professors, other students, or extra resources (i.e. TA, tutoring, SI).
- There were no associations found between student perceptions of course difficulty or grade confidence, and the ways that students preferred to get academic help during Spring 2020-Spring 2021.

DISCUSSION

- Although students expressed difficulties with learning throughout the pandemic so far, the results from our survey show that there is not a clear correlation between perceived changes in course difficulty and how well students thought they performed in their courses, compared to the ways students sought help within these courses.
- Most biology students prefer in-person learning, and reported that this course format increases their academic confidence. Therefore, a continued offering of in-person learning could increase student retention and confidence.
- Most biology students did not come to a consensus when asked to provide a preferred way of help. A continuation of offering different modes of help would benefit a majority of students.
- Other colleges have implemented additional support services for students throughout the COVID-19 pandemic, as it has been a difficult transition for many (Johnson, 2020). SUNY Geneseo may consider offering increased support services, such as peer mentoring, to aid students through the academic difficulties they have faced.

CONCLUSION

Through our statistical analysis, we were surprised to find that the only association with statistical significance was that between course difficulty and confidence in one's grade. However, most students rated course difficulty as neutral or difficult with confidence rated highly, which was contrary to our expectations. Although most of our analysis was deemed inconclusive, this may be due to the personal experiences of students throughout the COVID-19 pandemic. Each student most likely handled the disruptions caused by the pandemic differently, therefore explaining the lack of trends within our data.

FUTURE WORK

- To help us further understand the learning disruptions experienced by the pandemic, we have created another survey for the Fall 2021 semester asking similar questions about student self-efficacy, however we have added a new focus on student mental health.
- We are analyzing responses from a campus wide survey currently.
- From preliminary analysis, we found that students with a low motivation towards their academics also have poor mental health.
- Most students, regardless of the number of semesters they've been in college, rate their course difficulty either neutral or difficult.
- Students who take very difficult courses reported poor mental health.