University Honors Program Online Learning Evaluation and Recommendations





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Abstract

Due to the rise in technological advancements and an increased demand for educational online formats, many schools have started to offer online courses. The majority of these courses, however, do not include an honors section; the online format has not yet been adopted for many honors programs. In this review, a group of five University Honors Program (UHP) students at the University of North Carolina at Charlotte (UNCC) in the HONR 3700 class "Evaluating Educational and Social Innovations for Youth" determined that a need for an online option potentially exists within the honors program. Data collected from an exit survey involving eighty-two UHP students at UNCC showed that a majority of students left the program due to scheduling conflicts. This study was conducted to determine whether or not an online option for honors courses will be suitable for UHP students, and how they may be offered to produce effective and efficient learning outcomes. In doing so, the team compiled results from the survey sent out, as well as research from related literary and scholarly articles to understand how current UHP course material may be improved with online supplementation.

Introduction

Members of the University Honors Program (UHP) program at the University of North Carolina at Charlotte (UNCC) engage in a variety of events throughout their academic career; this includes participation in certain programs, social, community service, and enrichment events. Because of this, many tend to lack time within their schedule for traditional in-person courses; this view is shared by our group members as well as several other UHP students.

In conducting this research, we wanted to determine the impact that online courses may have on an individual's academic career. Data from related literary publications and a survey, directed towards current UHP students, were collected to determine if there was a need or desire for an online option to be offered within UHP. Some students, according to the online survey, expressed their desire to have online courses to free up time for work and mental health. Others were not so enthusiastic about the idea and have expressed a preference for in-person course offerings. According to Online Consortium, "90% of students think online learning is the same or better than the traditional classroom experience" (Online Consortium, 2016). The research was also used to evaluate the quality of online learning courses and understand its impact on a student's academic experience.

This study will discuss honors student and faculty concerns and will recommend potential online teaching platforms that may best suit the current and future needs of UHP students. In this unprecedented COVID-19 pandemic, we hope to provide direct insight into details of current online learning experiences.

We believe that based on the data and the findings from this research, there is evidence that supports offering honors-level courses in an online format.

Literature Review

Teaching and Lecturing Online: A Brief Review of Best Practice

When engaging in an online form of teaching, it is important to have a plan to ensure everything runs smoothly. Without a clear-cut and simple plan, students will end up feeling ill-prepared and uncomfortable in the online format. From an article published by ISTE concerning online usage, schools should ensure digital equity, provide teachers with adequate time to prepare and plan for an online curriculum, give teachers the necessary materials, provide clear expectations to students and staff, provide a kind-of robust learning, and address the emotional toll (Snelling & Fingal, March 2020).

Ensuring digital equity involves making sure each student will have access to a computer or any other device suitable for online learning. According to ISTE, many students and families "do not have access to one computer per person"; through the provision of accessible mobile devices and computers, more people will be able to stay on track and learn at the same level as other students (Snelling & Fingal, March 2020). In times of an online transition, it is especially crucial to have time allotted to prepare and adapt curriculum to the online setting in order to ensure a smooth transition and prevent students from coming off track. This means providing teachers and staff with the materials necessary to deliver an online curriculum. Communication, as commonly said, is key. Students, staff, and parents should know what is going on in order to make arrangements (Snelling & Fingal, March 2020). Providing a robust learning style entails the act of "breaking material into small chunks, being clear about expectations for online learning, providing immediate or frequent feedback through online knowledge checks and comments on assignments, and including virtual meetings or any other form to keep the human connection," (Snelling & Fingal, March 2020). As mentioned by educator Allison Yang, busy work should not be assigned during this time, as it adds on to the stress and anxiety a student may feel during this transition, (Snelling & Fingal, March 2020). Students may feel stress and anxiety as a result of feeling isolated, so it is imperative to address this emotional toll by establishing a human connection. This connection should involve acting outside of the teacher or professor's role as an academic educator.

Utilizing webpages, accessible files and text, and Learning Management Systems (LMS), such as Canvas, in a synchronous or asynchronous way allows instructors to push out quizzes,

tests, assignments, course content, and discussion chats to engage students and meet the needs of diverse learners, (Martin, 2020; Quality Matters, 2018). “Quality Matters” states that the unit-level learning objectives should be measurable and consistent with the course objectives (Quality Matters, 2018). Furthermore, the learning objectives should be stated clearly and written from the learner’s perspective rather than the instructor’s perspective. Online courses must also have a clear grading scale and should include a forum for students to ask questions. Instructors are recommended to be present in the online course by responding to discussions, holding virtual office hours, and using instructor-created Powerpoints or videos.

Learning Online: How Students Can Learn and Socialize in an Online Environment

To summarize how to provide online instruction, the Instructional Development Center at the University of New Hampshire outlined the 10 Best Practices for Online Teaching as Preparation and Planning, Design, Expectation, Presence, Presentation, Interaction, Engagement, Communication, Feedback, and Assessment and Evaluation, (Winters et. al.). Having a social experience in an online course may seem challenging, however if the course design follows the 10 Best Practices, the online course can still provide a social element. By incorporating the 4th Best Practice, Presence, the instructor makes time for introductions from each student and creates a nurturing environment by letting students get to know one another. In an online course, it is recommended that students are allowed at some point to “see” the instructor through a pre-recorded video or live video chat. Other ways to incorporate an online “presence” include offering something like a student lounge for Skype chats, WebEx meetings, or Google Hangout office hours. Additionally, the designer of an online course must include a form of Interaction. Interaction has been defined by three simple relationships: Learner-Learner, Learner-Instructor, and Learner-Content, (Moore 1993; Martin 2019).

The Learner-Learner interaction uses virtual “student lounges”, icebreaker introductions and responses. In some cases, there are student forum moderators, peer-review projects, and breakout rooms or small group meetings. The Learner-Instructor guides instructors to use chat forms/rooms, whiteboard recordings, polls, direct interaction with students using their names, and assignments with reflection components. The Learner-Content relationship is an important element in online course delivery. Using more than one teaching format and using games or

simulations to keep attention may provide ways for students to engage in the content more in depth, (Moore 1993; Martin 2019).

Another way to have a Learner-Content relationship is to use audio and video clips from guest lecturers, guest talks and student presentations, and guide students in generating their own content. Having engagement in the online course goes hand in hand with interaction and encourages full student participation. A public display of student work may be an effective way to increase engagement. To hold the online course together, effective communication either synchronous/asynchronous, needs to be at the top of priorities. Holding online office hours, being aware of time zones (if any differences), and making frequent instructor appearances can help enhance engagement. Most importantly, offering ample feedback on assignments is extremely important. Likewise, receiving feedback from students about the course and how it could improve is a critical component to creating an effective online course, (Moore 1993; Martin 2019).

Engagement matters: Student Perceptions on the Importance of Engagement Strategies in the Online Learning Environment

In a study conducted by Dr. Florence Martin (University of North Carolina at Charlotte) and Dr. Doris Bollinger (University of Wyoming), three main research questions were asked to understand student engagement in the online setting. These questions included: "1) Which strategies do students perceive to be important in enhancing learner-learner, learner-instructor, and learner-content engagement in the online environment?, 2) Which strategies do students identify as most valuable and least valuable to engaging them in the online learning environment?, and 3) Are there differences in responses based on individual differences, such as gender, age, and experience with online courses?" (Martin & Bollinger, 2018). To answer these questions, they analyzed surveys from 146 students from eight schools across the U.S; the electronic surveys consisted of 38 questions, concerning "29 Likert-type items ranging from 1 (very unimportant) to 5 (very important), three open-ended questions, and six demographic questions" (Martin & Bollinger, 2018) . Of these students, 67.8% were female and 35.2% were male of varying degree levels ranging from 20-67 years old; "most of the participants were were studying in the discipline of education (85.5%), whereas others were in health sciences (8.9%), engineering (2.8%), arts and sciences (2.1%), and business (0.7%)" (Martin & Bollinger, 2018).

In general, students participating in the online format “most valued strategies that provided interaction between learners and instructors,” (Martin & Bollinger, 2018). They liked receiving instructor feedback on assignments and course material, as well as small instructor-guided group discussions that “encouraged deep reflection” and “deeper understanding” (Martin & Bollinger, 2018). Simple reflective assignments, however, were deemed to be one of the least important strategies from the study. One student commented, saying that “it is so encouraging to believe that the instructor is getting to know me as an individual, and is willing to connect with me personally”; another wrote “I felt that I was lonely in the desert....Preparing a well-designed curricula without instructor support does not mean that students will be engaged as planned,” (Martin & Bollinger, 2018).

Furthermore, students rated email reminders and announcements and provision of graded rubrics to be among the highest strategies. Between students and their peers, icebreaker discussions and collaborative work were rated among the highest strategies; video chats outside of class time were deemed ineffective, due to scheduling restraints. Results from the survey concerning the student-content concept found that “working on realistic scenarios (e.g., case studies, reports, research papers, presentations, client projects) was listed as the most beneficial strategy,” (Martin & Bollinger, 2018).

Interestingly, some other students believed discussion forums and synchronous meetings with group work to be among the least valuable strategies. In addition,“videos and synchronous meetings were listed by students as the most valuable strategies, but also listed as the least valuable strategies by other students.” The students, who favored the use of a virtual lounge, were found to be “with a lower level of online course experience” than students, who preferred not to use them (Martin & Bollinger). Despite this, student engagement still proves to be an important factor in a student’s educational career.

Student Perception of Helpfulness of Facilitation Strategies that Enhance Instructor Presence, Connectedness, Engagement and Learning in Online Courses

According to research conducted by Dr. Florence Martin and her colleagues, one of the greatest factors in student learning is instructors that are present in facilitating content and actively motivating students. “As an online facilitator, instructors keep discussion on track, assist students with technical problems, provide periodic announcements to the class, respond to

student emails, and grade work promptly (Correia & Baran, 2010; Mazzolini & Maddison, 2007; Sheridan & Kelly, 2010).” This facilitation must be adapted to suit the online environment. Instructors should be present for discussions, both in live discussion forums or actively proposing questions to keep student discussions on track. Research shows students prefer online discussions to be facilitated by the instructor, not peers, (Martin & Wang & Sadaf, 2018).

Another key point highlighted by the research was responding to students in a timely manner. Instructors should try to respond within 24-48 hours of messages as research shows this is a strong indicator of student success, (Martin & Wang & Sadaf, 2018). Timely feedback on assignments is also highly important so students can learn from mistakes by asking what went wrong. Students dislike having to wait long for answers to problems, thus, feedback on assignments should be given within 7 days, (Martin & Wang & Sadaf, 2018).

Rapid response helps students perceive the instructor as a valid authority and makes them feel the instructor cares about their class and the students learning. The more interaction a teacher has, the more present they will seem. This engages students, improving quality of learning and leading to increased motivation and satisfaction in the course, (Martin & Wang & Sadaf, 2018).

Introduction and orientation videos should be used to explain the course and let students develop a bond with the teacher, (Martin & Wang & Sadaf, 2018). The ability to contact the instructor via multiple sources is paramount to facilitate interaction and prevent students from feeling isolated and delay disinterest in the class. Weekly announcements should be used so online students can stay on track and know exactly what is expected of them/what is due the upcoming week, (Martin & Wang & Sadaf, 2018).

Finally, lectures should use multimedia to present information to students. A lecture heavy online course is an inefficient way to convey information to students as it lacks engagement, (Martin & Wang & Sadaf, 2018). Furthermore, students should have some way to interact during lectures so they do not become stale. An hour of learning online is very different than an hour of learning in the classroom, and research shows a lecture-heavy online course is far less effective than an in person one, (Martin & Wang & Sadaf, 2018). This being said, research also shows that students adapt and adjust as they learn online. Significantly more engagement is required for novice students as opposed to veterans, (Martin & Wang & Sadaf, 2018).

Democratizing Digital Learning: Theorizing the Fully Online Learning Community Model

The University of Ontario Institute of Technology (UOIT) established the Fully Online Learning Community (FOLC). FOLC is a response to some problems, such as a greater demand for higher competency development, deficiency distance education, and the search for learning models that deepen democratic experience (Blayone, *et al. ,*2017). Learning communities work best when they are democratized, transactional distance is decreased between learners and educators, efficient assessments, and encourages different forms of cognitive development. Transactional distance theory articulates the idea that "distance education is not simply a geographic separation of learners and teachers, but, more importantly, is a pedagogical concept," (Blayone, *et al. ,*2017). It's a teaching environment where the separation between the teacher and learner is significant enough that special teaching-learning strategies and techniques must be used.

The purpose of distance education theory is to summarize the different relationships and the strengths between variables that make up transactional distance, especially the behaviours of teachers and learners, (Blayone, *et al. ,*2017). Fully online learning communities are self-regulating and transformative, which can be sustained by using a diversity of beneficial learning outcomes and deepening democratic learning of online learners. Online learning encourages divergent thinking, builds interpersonal relationships, and promotes distributed responsibility through feedback that triggers cognitive dissonance.

Purpose of the Study

Since August 2019, 35 UHP students have left the program. Data taken from exit interviews conducted by Coordinator of Planning, Denise Lynch, identified multiple reasons that led to students leaving. These reasons have been categorized based on similar themes below:

1. 60.0% Scheduling Issues
2. 14.3% Other
3. 11.4% Left to join or focus on other scholar programs
4. 8.57% Stress of additional classes/requirements of the program
5. 5.71% Received a teaching fellow

Our team identified that the results from the 35 students were potentially not statistically significant (40 students being the minimum ideal sample size), however, it was assumed this

number was close enough to yield accurate data. This shortcoming was due to only these 35 leaving since exit interviews began.

Scheduling issues made up the majority of responses and thus, a significant amount of students could potentially be retained with a more flexible schedule. After reviewing the available data, our research team set out to discover if offering online courses would be a viable option for UHP students, who struggle with scheduling conflicts, and if so, what sort of strategies and teaching techniques would be best for UHP to employ. Ideally, the team also wanted to propose a potential curriculum that would incorporate the findings and easily conform to the existing UHP curriculum goals and framework.

Methods

Participants

The sample consisted of 82 members of the University Honors Program (UHP) at the University of North Carolina at Charlotte (UNCC). The only requirement for eligibility was that participants had to be a member of UHP at UNCC.

Materials

Participants used a device, such as a phone, tablet, or computer, with internet connectivity in order to access and respond to the survey. Additionally, UHP utilizes a service / app "Helper Helper" to post events and confirm attendance. This app, in addition to email, was used to distribute the survey. The survey was built with Google Forms and distributed via a link through email and on Helper Helper.

Procedure

Before participants could begin the survey they were asked for their consent to "anonymously provide information regarding your opinions on Online Instruction" After this, the participants were able to begin the survey, which took approximately 10 minutes to complete. Completion of the survey concluded their participation in this study.

Measures

This study measured student agreement, particularly to compare online and in-person instruction, by using a likert scale with various statements, such as “I feel a sense of community through online classes and class discussions”, and “I feel a sense of community through in-person classes and class discussions”. Free response questions were also asked in an attempt to better understand these responses and what could better support students. These included questions such as “Please describe how your academic workload has changed as a result of the transition to virtual instruction this semester”, and “Do you have suggestions would you offer to your professors to support you through the last month of the semester?”.The questions asked were thought to be important for understanding the feelings of UHP students in regards to online and in-person instruction. A full list of the questions is available in Appendix A.

Analysis

Analysis was done on the data to better understand it. Statistical analysis in order to find the mean and standard deviation of responses to questions, and a descriptive analysis was also done to better understand the data and particularly the free responses. Word clouds were often created from the free responses in an attempt to visualize the responses. The tools used were Excel, R, Python, and other various tools.

Results

Refer to Appendix A for a complete table of all data figures. Each survey question will be discussed followed by a summary of conclusions.

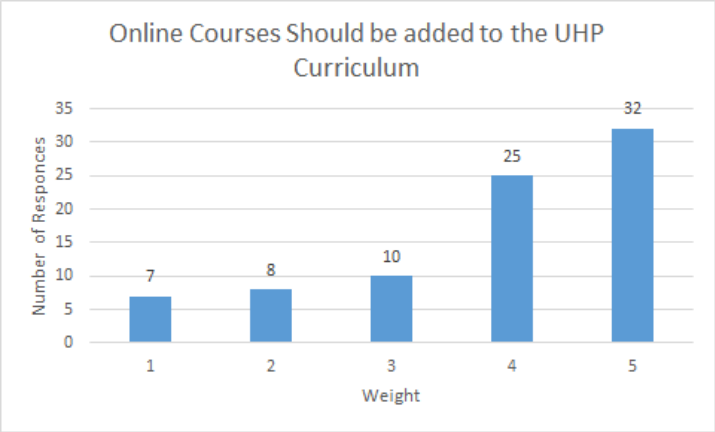


Figure 1: Online courses should be added to the UHP curriculum

Figure 1 shows the 82 responses of UHP students from 1 - Strongly Disagree to 5 - Strongly Agree regarding whether or not online courses should be added to the UHP curriculum. The average response of 3.817 conclusively demonstrates the idea online classes are supported by students in the program and that students believe online classes would reduce overall stress and allow for less scheduling conflicts.

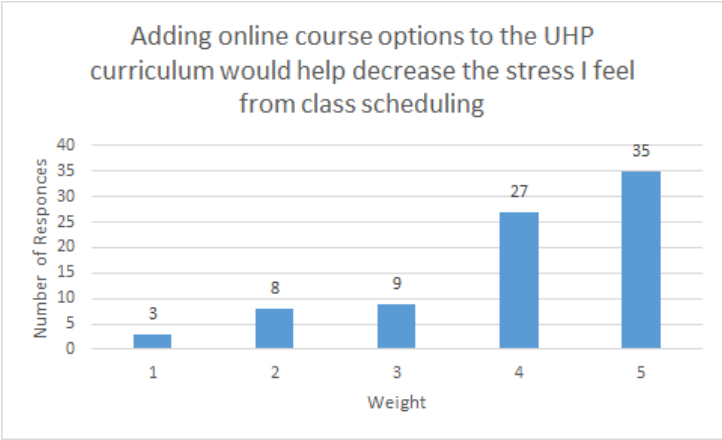


Figure 2: Adding online course options to the UHP curriculum would help decrease the stress I feel from class scheduling.

As seen evidently by the visual data in Figure 2, as well as the average response of 4.012, students within UHP agree that online classes would decrease stress due to class scheduling. As shown by the data in the "Purpose of Study" section, this fits perfectly with why a large majority of students leave UHP and reinforces the idea that students within this organization feel the need for more flexible classes.

This need for more flexible classes primarily stems from the drive to achieve higher academically. Many of the written responses discussed how this flexibility would allow for faster graduation or allowing for the taking of additional classes they were interested in. They also wanted the ability to work or take part in other organizations.

As shown by the word cloud (Figures, Figure 3), students would prefer the online class option to exist and thus allowing them to take other classes, go to work, or just have more time in general. Students did, however, raise questions concerning the community aspect of UHP. Some felt that online classes would break up this sense of community and most agreed that it should be an option, not a forced requirement. Some also felt that online classes would allow for students to take part in more volunteering or socials UHP offered, therefore enhancing the community.

Figure 4 (Figures) shows the 82 responses to "class discussions in an online format are as effective as class discussions in an in-person format.". It can be seen that while students do agree with this statement, many somewhat disagree or strongly disagree. The average rating of 2.54 demonstrates this tendency towards disagreeing, and the standard deviation of 1.36 helps to show there is a widespread array of responses.

Figure 5 (Figures) shows the 82 responses to "online courses have had a positive impact on my learning." There is a mean of 3.01, or "neutral", but there is a wide array of answers ranging from strongly disagreeing to strongly agreeing present.

Figure 6 (Figures) shows 82 responses regarding if respondents absorb information well in an in-person class format. It can be clearly seen that respondents do absorb information well (mean = 4.35) in an in-person course format with no one disagreeing with the statement. Figure 7 (Figures) , however, shows 82 responses regarding absorbing information in an online course format are very different. While the average response is 3.02 or "neutral", there are many that strongly disagree or somewhat disagree. The standard deviations of 0.62 above and 1.41 below help demonstrate this as well--the answers are far more widespread regarding the ability to absorb information well in an online course format.

Figure 8 (Figures), also with 82 responses, shows the degree of agreement respondents had to "I feel a sense of community through in-person classes and class discussions". It can be seen that most students agreed with this statement, with only some neutral responses or responses in disagreement. Contrary to this, the responses to feeling a sense of community through online classes and class discussions, shown in Figure 9 (Figures), are much more

widespread and have many more responses that disagree with the statement or are neutral. The mean of 2.55, “neutral” leaning slightly towards disagreeing, versus the mean of 4.2 above clearly show the difference in attitudes for online and in-person courses.

The responses to “I feel overwhelmed by the amount of work that I will need to complete to finish the semester successfully”, shown in Figure 10, have a mean rating of 3.37 or “neutral” leaning slightly towards agreeing. This shows that many students do feel overwhelmed by the amount of work they will need to complete this semester.

Figure 11(Figures) shows responses regarding “my grades have suffered due to online course formats.” It can be seen that there is a mean response of 2.54, or neutral leaning towards disagreeing. It can also be seen that while some somewhat agree, very few strongly agree with this statement. Figure 12 (Figures) shows the 82 responses to the statement “the overall volume of work for my courses has increased since UNC Charlotte transitioned all classes online on March 16th. The mean response, 3.36, shows that most students do agree with this statement. However, it can be seen that there are a large number of students which disagree or feel neutrally about this statement as well.

Students who completed the survey were asked to select which formats of online learning that they feel work well for them. The responses were not limited to one vote. Out of the questions asked (refer to Appendix A for a complete list), 50% or more of the voters selected the following:

1. 62.2% of students selected “Discussion board via Canvas or other online discussion form”
2. 75.6% of students selected “Canvas quizzes with no time limit”
3. 62.2% of students selected “Virtual small group discussions on WebEx/Zoom/ other online virtual meeting software”
4. 85.4% of students selected “Content posted to Canvas and completed at your own time before due date”
5. 67.1% of students selected “Virtual/online office hours with professors”

The most popular format was an asynchronous format in which course material is posted on Canvas and then completed over a given time frame at the student’s own pace. This asynchronous format complements virtual small group meetings, virtual class meetings, and virtual instructor meetings.

During the COVID-19 pandemic, UNC Charlotte has moved to a complete online course delivery format. There are many common themes that emerge when reviewing the written responses by UHP students. They show both positive feedback and supportive suggestions to online course delivery. The suggestions made by students and experiences that they have endured during the online course delivery transition may be helpful in the creation of an honors level online course.

As seen by both Question 6 and the responses in Question 7, online discussion boards and virtual face-to-face meetings with students are a popular suggestion. Offering a consistent course delivery structure to students, as outlined by the "online course delivery best practices", is a key element in effective online courses. Students also indicated that timely responses from peers and professors was very valuable in the overall success of transitioning to online classes. One concern that discussion boards bring about is the accountability of students. Students in courses where online discussion boards are being utilized have encountered issues where not all of the students respond or participate in the online discussion. In an online delivery course it is critical that instructors are prompt and hold students accountable when they do not participate. A common theme in the responses is the dramatic increase in workload faced by students during the transition into 100% online courses. One common misunderstanding about online course delivery is that more assignments need to be completed to obtain the critical course material. The results of the survey indicate that when designing a potential online course for UHP one must consider:

1. Timely responses from instructors
2. Clear syllabus with detailed due dates for course assignments
3. Consistent options for virtual face-to-face communication

As expected, we received varying answers to this question within the survey. Some people stated their difficulties with online learning concerning lack of motivation, increase in distractions, an absence of human interaction, an increase in course work, a decrease in retainment of material, and a general incompatibility with their personal modes of learning. Many others, on the other hand, noted an increase in freedom with their time and their ability to complete course material on their own time, a decrease in stress, and ease of learning.

From analysis of answers from the free response questions, it is important to note that many tend to overlap with one another; stress, time management skills, and learning, for

example, appeared to increase for some, and decrease for others. Stress increased because of an increase in course load, while time management skills suffered due to lack of motivation and the feeling of "being on break". Learning the material also went both ways; some reported an increase in learning, while others reported negatively. When learning was asynchronous, as suggested in some of the answers, students were able to better learn and retain material. One noted how they could "pause and rewind recorded lectures and think of the material discussed" and how they could even "come back to the lectures later with a clearer and, possibly, well-rested mind". Other times, students answered with a low retention and learning of material due to the increased distractions and lack of motivation.

It is important to note that this survey was taken at the time of the COVID-19 pandemic, where all students have been forced into an online format for every class they were taking. Some students and teachers were never exposed to the online learning environment. Because of this, they were unprepared for the transition to online learning/teaching. In addition, teachers and professors were rapidly forced to adapt pre-planned curriculum into one that can be delivered remotely via an online format; where not all of them had backgrounds in online teaching. Due to the instructors ability to transition, students in some classes fared better than others. As mentioned within the survey, student satisfaction with the online delivery "really depended on the teacher and method of teaching" and the "subject of the class and the way it is set up". Refer to the Figures section for word clouds based on student responses to survey questions.

Discussion

Factors Which Could Not Be Accounted For

Potential factors that could have altered the data gathered are strong opinions regarding UHP or online classes in general, as well as the COVID-19 outbreak. Online classes are a controversial subject for many people and thus our results have the potential to be skewed by a higher reporting of those with strong biases. Furthermore, with the shutdown of many educational institutions due to the COVID-19 pandemic, students being forced to conduct classes solely online could cause bias via frustration or other emotional factors. The sample size of 82 responses was well over the margin of statistical significance, thus, small sample size should not be a factor and the data gathered can be assumed to be accurate.

Conclusion

From our research, it is clear that students in UHP will value the offer of an online course for honors credit. UHP continuously grows and adapts not only to meet the needs of students, but also to offer the best materials and solutions for a quality education. We believe the addition of online courses to the UHP curriculum would allow students to fully benefit and utilize the opportunities UHP offers. The data from our survey highlighted what online course platforms work best for UHP students and our research demonstrates what historic curriculums have done well. By identifying what works best, course designers can make confident decisions on how to execute online course material. Prior to our research, it was unclear how to prevent or lower the amount of UHP students who leave the program. After our survey was conducted, it became clear that offering an online course may prevent students from leaving UHP and may be a viable option in the future to provide flexibility that many academic programs need.

As the survey was taken during the COVID-19 pandemic, our survey indicated that both students and instructors need support to transition and prepare for online learning. During this pandemic, all classes, including honors classes, were forced to be put online. From our survey, it can be concluded that if an online honors course format was already established, students may have had an easier time transitioning and adapting to the online course delivery. In the future, it may be helpful to establish how to best give honors online courses to prepare for unexpected events such as a pandemic.

Future Research

A potential direct future follow up to this research could be questions conducted though the end of year evaluations though UHP classes. These results could then be compared to future online UHP end of year evaluations to give a direct comparison between in person and online UHP classes. Additionally, an exploration of the relationship between online education and mental health shows promise since many students responded it could reduce overall stress.

With all the advances in technology, there must be a change in educational approaches to better deliver a greater educational impact. There is a greater need especially in times of necessary isolation, such as during the COVID-19 outbreak. One such example of technology that may have an educational application and serve teachers well in engaging students is augmented reality (AR) and virtual reality (VR). AR and VR both may prove useful in delivering

a more wholesome online educational experience. Both applications can potentially be delivered remotely, effectively solving the inability to attend class in person; more research needs to be done in order to make these technologies available for remote experiences. However, both have their own distinct qualities. Virtual reality involves the complete immersion of the student into a virtual setting, while augmented reality is almost like a mix between the online and real-world; augmented reality "enables the user to interact with a 3D virtual object and real world in a real time application" (Kurilovas, 2020). It serves as a form of active learning that creatively engages the student in education; student interest was found to be one of the most important aspects in learning. In fact, "AR is one of the most promising technologies to improve learning motivation, quality, and effectiveness" (Kurilovas, 2020). In a study conducted by Eugenijus Kurilovas of Vilnius Gediminas Technical University (VGTU) using a "user-centered methodology (i.e. model and method) to evaluate suitability, acceptance, and use of AR applications in education", AR was found to serve as a good driver of learning; however, due to the nature of this study and lack of surrounding research in this area, it can not be deemed as a very conclusive result (Kurilovas, 2020). If VR and AR technology were to be adopted, then prices for each would have to decrease in the near future to make it more suitable and feasible. More research would also need to be conducted to produce conclusive results on its apparent effectiveness.

How to Connect UHP and Online Classes

Using the available data, our team formulated a curriculum supplement based on the key question: "What are the goals of UHP and how can a virtual setting best accomplish and enhance these objectives?" This first category of suggestions are meant to be easily incorporated into the existing UHP curriculum and would have an immediate impact on the learning opportunities of UHP members. The second category are goals that would take much more effort to implement, however, ones we believe UHP members would greatly benefit from.

Adjustments Requiring Minimal Changes to the Existing UHP Curriculum:

1. During the honors seminar freshman course HONR 1700, an online training session could be provided for students to learn how to use Webex and other online learning services. The collaboration skills needed for online learning and group collaboration

projects will be taught in a short training session similar to the introduction of Library resources. Training for proper use of technology helps lay the foundation of skills needed for online courses in any area of study and may also help accelerate group projects who find it difficult to meet in-person.

2. Honors online classes focus on student motivated projects and community driven efforts. Projects could be individual or group oriented, but they would be largely student driven with instructors available for check-ins and meetings. This element of online courses align with the mission statement of the honors program that supports "students as they become agents of their own vision" (UNCC Honors College Mission Statement). This adjustment could also encourage more engagement with the Charlotte community.
3. Instructors in an online class should be available and present for facilitation.
4. Instructors could conduct lectures via Webex or other sources to teach key ideas and components to students in the class or to supplement in person class time.
5. Multimedia is crucial to student engagement within an online setting, therefore, lectures should offer more interactive elements designed for online learning.
6. Weekly announcements could be used so online students can stay on track and know exactly what is expected of them/what is upcoming for the week.
7. Lectures can be pre-recorded and feature discussion sections for questions and comments about the videos. Self-learning is a cornerstone of honors courses and the motivation to learn originates with the students.
8. The discussion section of Canvas can be used for required readings and their discussions.
9. Professors should be available via Webex or other sources for consultation, as well as hold official office hours should students have difficulties.
10. Teachers should respond to questions within 24-48 hours. They should provide feedback on assignments or discussions within 7 days. These responses should be personal and build a relationship with the student.
11. Professors should coordinate with professionals relating to their classes for online guest discussions. This would allow students to converse with professionals from all over the world.
12. Student projects could incorporate realistic and community driven projects such as evaluating case studies, external research, presentations, and client projects outsourced

for students to complete in UHP online courses.

13. More asynchronous classes should be offered to alleviate scheduling conflicts on fulfilling honors courses that do not exactly fit in someone's everyday schedule.

Adjustments Requiring Significant Changes to UHP but are Realistic Long Term Goals:

14. For students wishing to study abroad on a schedule not offered by the honors program, there can be online opportunities that count for honors class requirements. These offerings would be supplemented with existing study abroad programs where an honors option can be pursued. Instructors would provide remote access for assistance as well as assign relevant work for credit. This concept would enhance the interdisciplinary pedagogy, a cornerstone of UHP, by allowing students to immerse themselves in another culture.
15. The honors program could partner with jobs or internships that can be used for independent study and honors credit (ex. Volunteering with an urban leadership program and creating a report that evaluates practices and how it can be improved). Partnerships could even be something outside of one's major to further increase interdisciplinary inquiry.
16. UHP could coordinate with other UNCC honors programs to provide duel credits so students do not have to choose between one honors program or another. This enhances consortium building, an additional goal of UHP.
17. The program could connect with other honors colleges at other universities virtually and collaborate in discussions/projects.

Other Alternatives to Integrating Online Learning:

- Offer more seats in honors classes
- Offer more honors classes per semester
- Offer summer honors courses
- Offer a hybrid (half online, half in-person class)
- Offer project based classes (online, in person, hybrid) to collaborate between majors and does not require a full time staff instructor

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Appendixes

Appendix A: Survey Questions

For our research, the following questions were asked in the survey:

1. What impact do online courses have on your learning? (1 - Significant Negative Impact), (3- No Impact), (5- Significant Positive Impact)
2. [Optional] Explain the impact online courses have on your learning.
3. [Optional] What (if anything) could make online learning more beneficial for you, compared to in-person classes?
4. To what extent do you agree with the following statements about online and in-person courses you have participated in at any time during your college career (this semester due to COVID-19 or at any point in the past)? (Strongly disagree, Somewhat disagree, Neutral, Somewhat agree, Somewhat agree, Strongly agree)
    a. I feel a sense of community through online classes and class discussions.
    b. I feel a sense of community through in-person classes and class discussions.
    c. Online courses have had a positive impact on my learning.
    d. I absorb information well in an online course format.
    e. I absorb information well in an in-person course format.
    f. My grades have suffered due to online course formats.
5. To what extent would you agree with the following statements regarding classes that have transitioned to be online this semester? (Strongly disagree, Somewhat disagree, Neutral, Somewhat agree, Somewhat agree, Strongly agree)
    a. Class discussions in an online format are as effective as class discussions in an in-person format.
    b. The overall volume of work for my courses has increased since UNC Charlotte transitioned all classes online on March 16th.
    c. I feel overwhelmed by the amount of work that I will need to complete to finish the semester successfully.
6. Which formats do you feel work well for online learning? (Select all that apply)
    a. Discussion board via Canvas or other online discussion form
    b. Timed canvas quizzes

c. Canvas quizzes with no time limit
d. Virtual small group discussions on WebEx/Zoom/ other online virtual meeting software
e. WebEx/Zoom full class meetings at specified time during week
f. Content posted to Canvas and completed at your own time before due date
g. Poll everywhere or other polling program for class questions or participation
h. Virtual/online office hours with professors
i. Other online homework submission programs/software (EX. My Lab and Mastering, WileyPLUS, Aleks)

7. Please describe how your academic workload has changed as a result of the transition to virtual instruction this semester. Do you have suggestions would you offer to your professors to support you through the last month of the semester?

8. To what extent would you agree with the following statements: (Strongly disagree, Somewhat disagree, Neutral, Somewhat agree, Somewhat agree, Strongly agree)

a. Online courses should be added to the UHP curriculum.
b. Adding online course options to the UHP curriculum would help decrease the stress I feel from class scheduling difficulties.

9. Please elaborate on your reasoning for your response to the previous question. If you agree that online courses should be added, what are the primary benefits? If you disagree, what are the primary drawbacks?

Figures

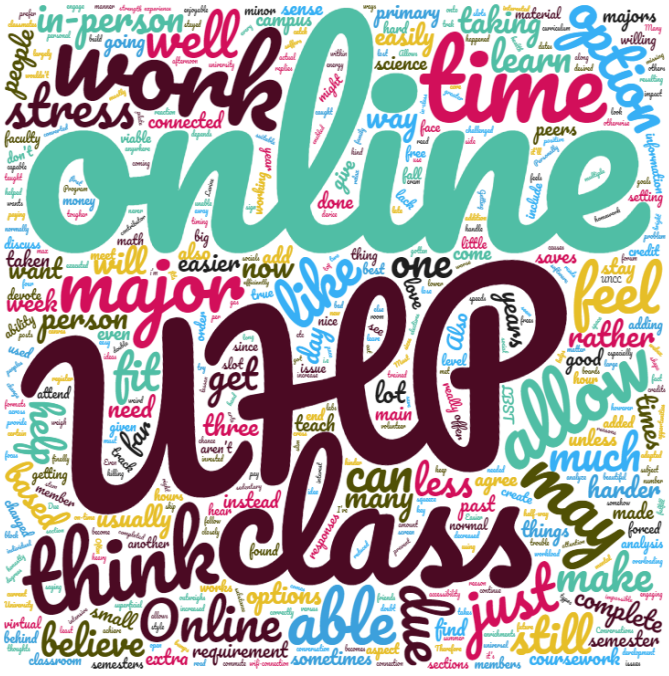


Figure 3: Word cloud of free response question

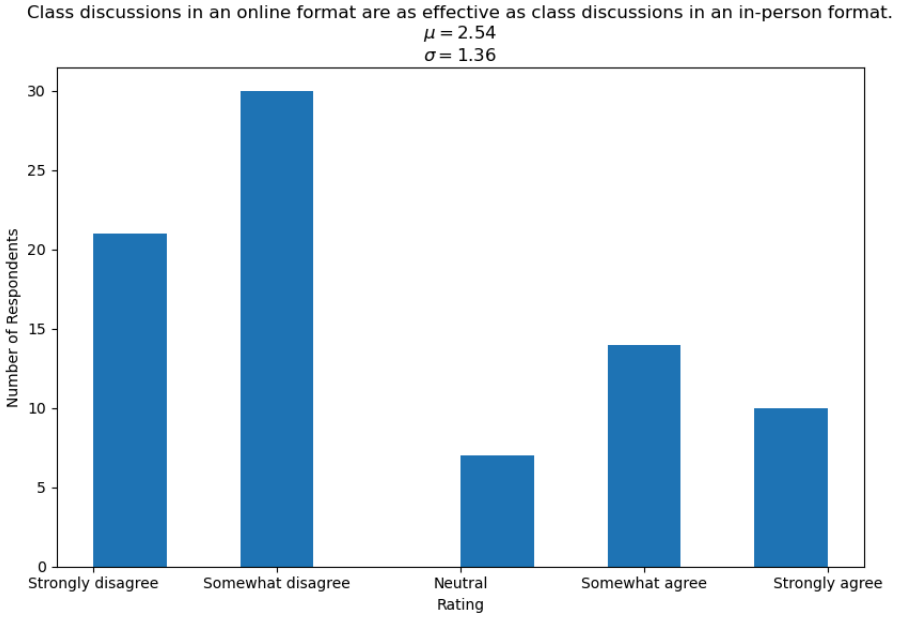


Figure 4: Class discussions in an online format are as effective as class discussions in an in-person format

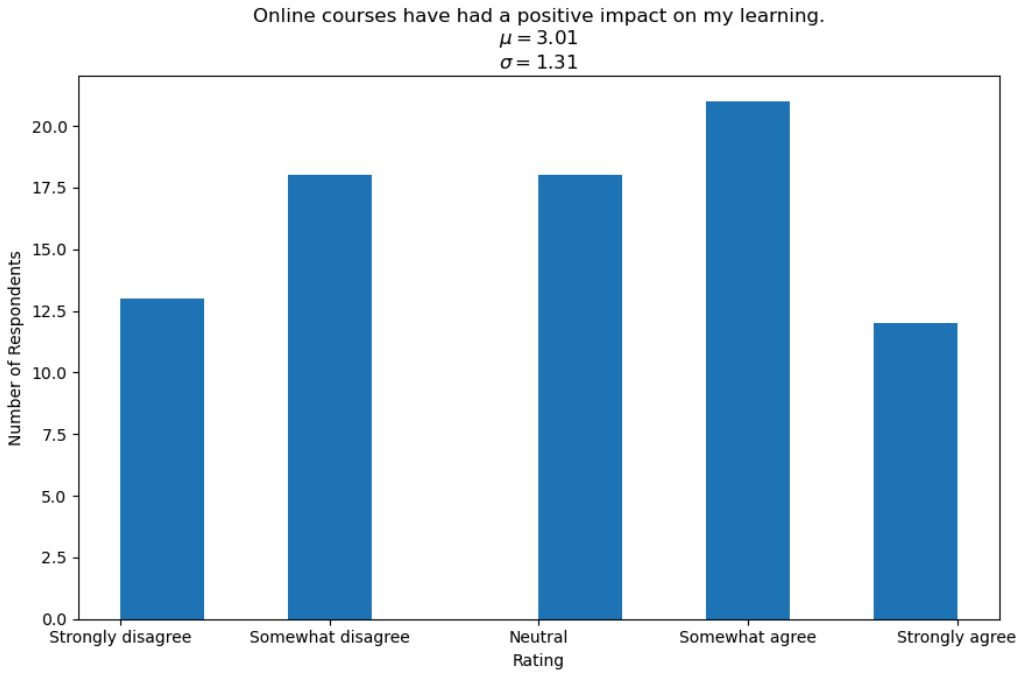


Figure 5: Online courses have had a positive impact on my learning.

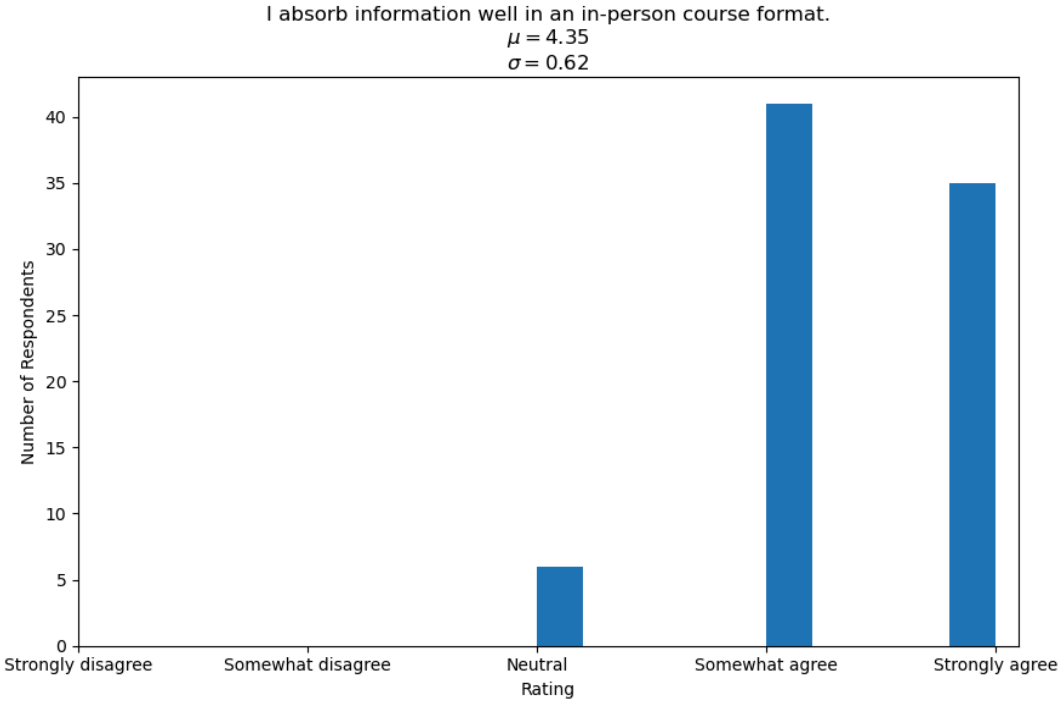


Figure 6: I absorb information well in an in-person class format.

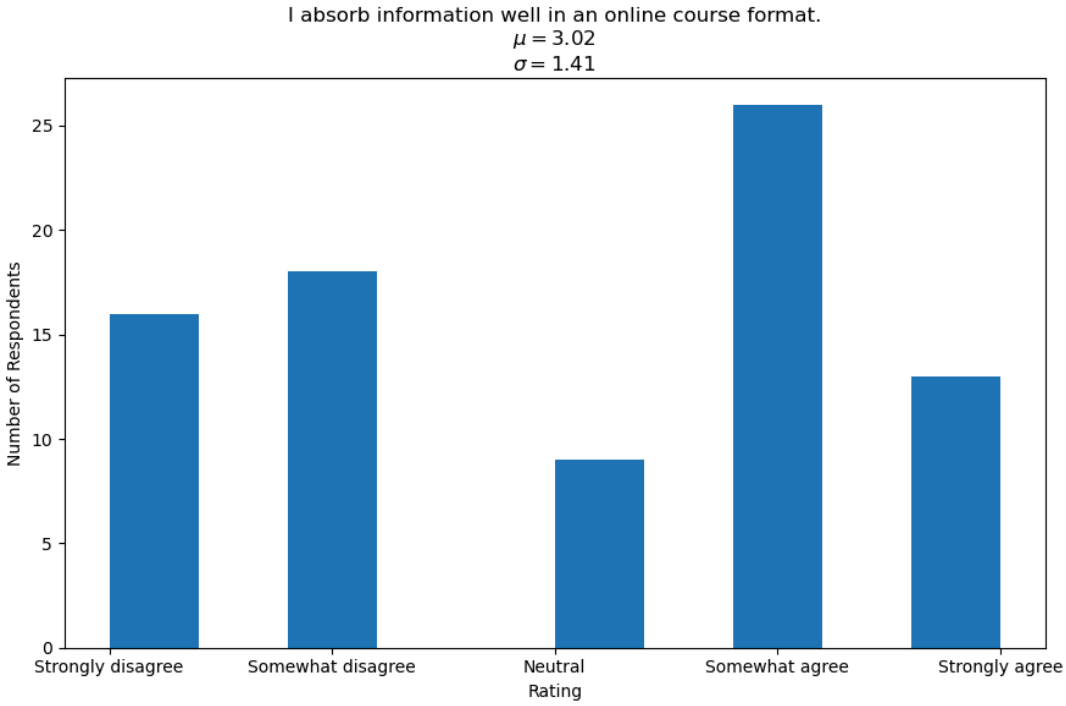


Figure 7: I absorb information well in an online course format.

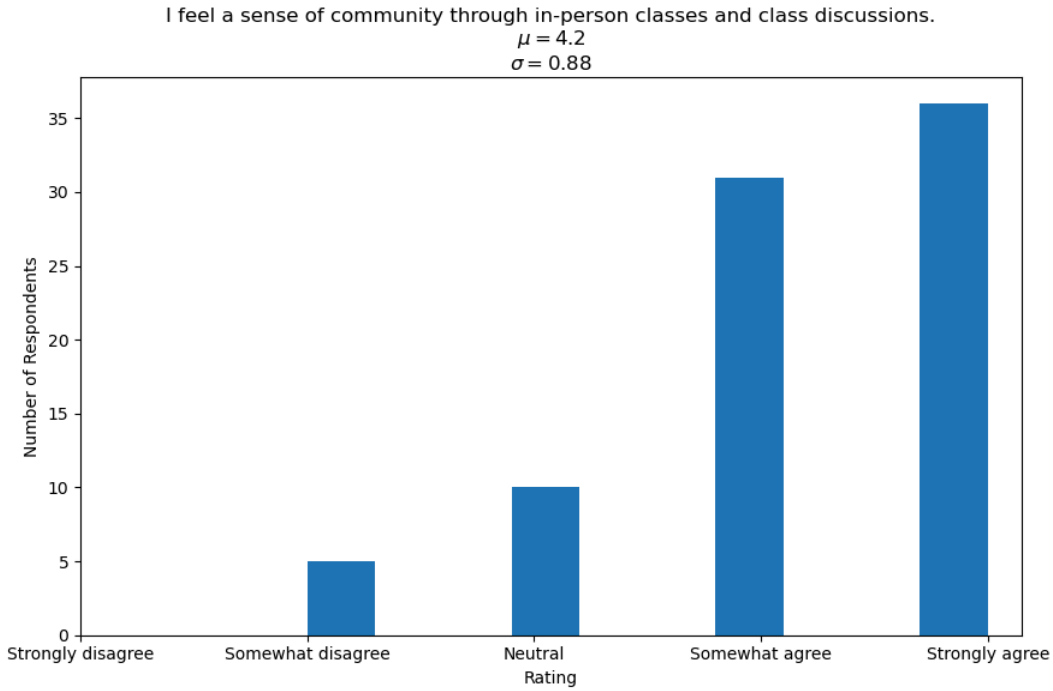


Figure 8: I feel a sense of community through in-person classes and class discussions.

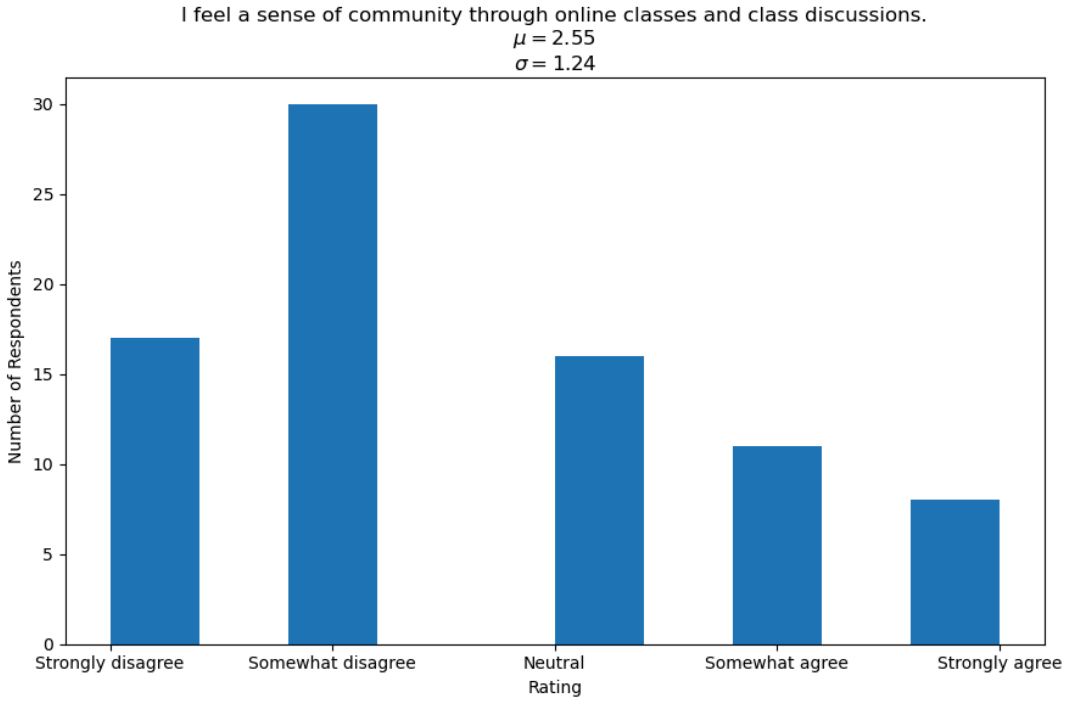


Figure 9: I feel a sense of community through online classes and class discussions.

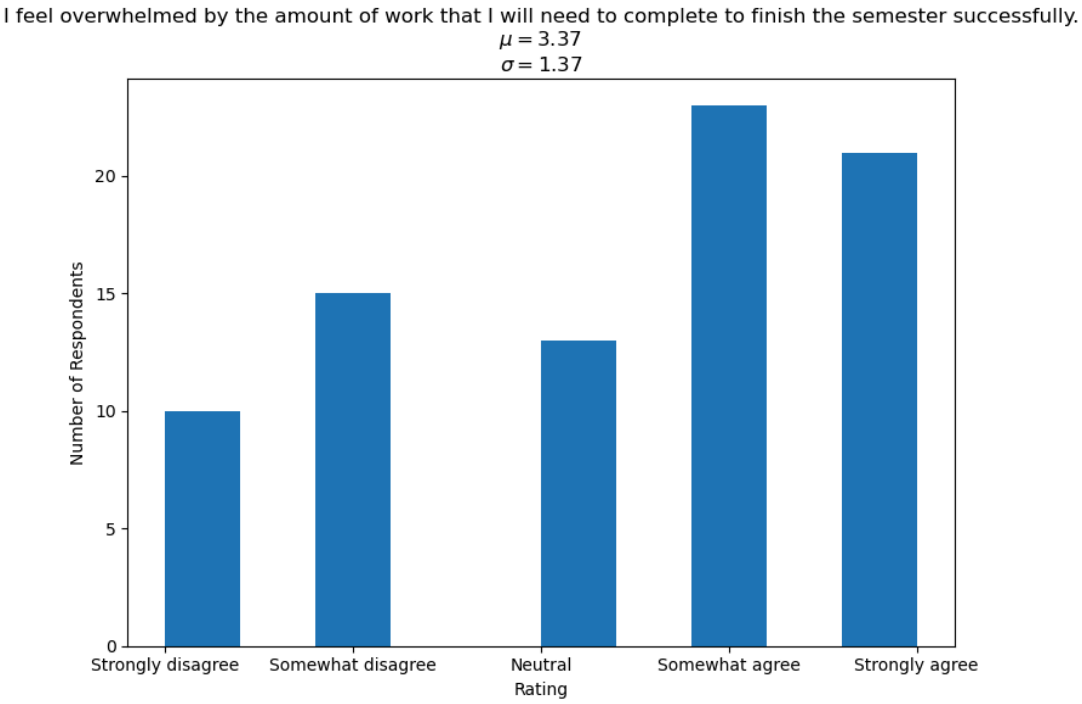


Figure 10: I feel overwhelmed by the amount of work that I will need to complete to finish the semester successfully.

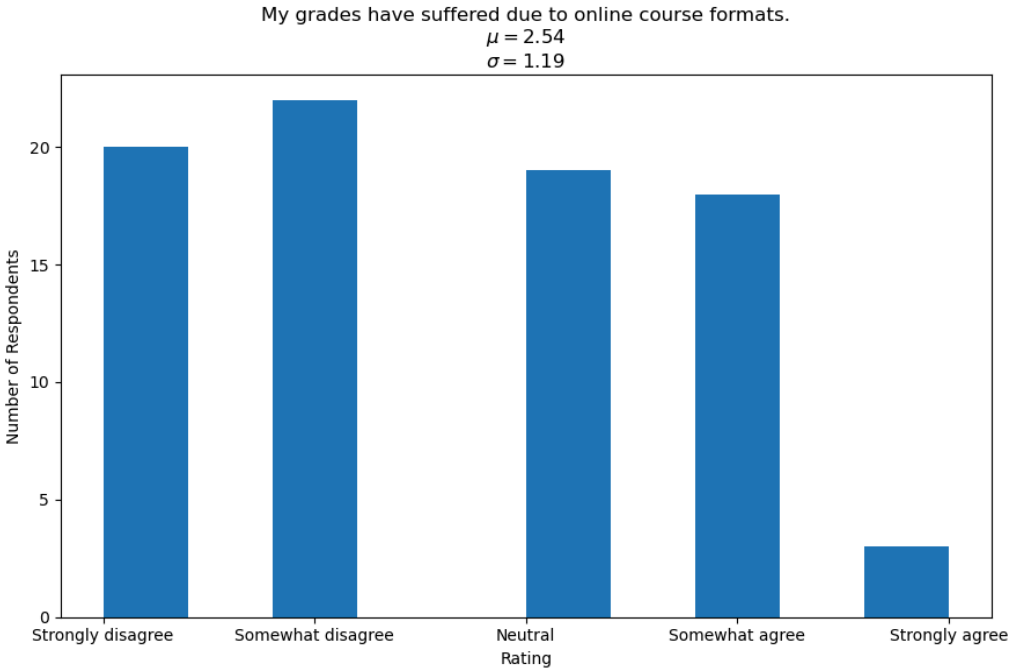


Figure 11: My grades have suffered due to online course formats.

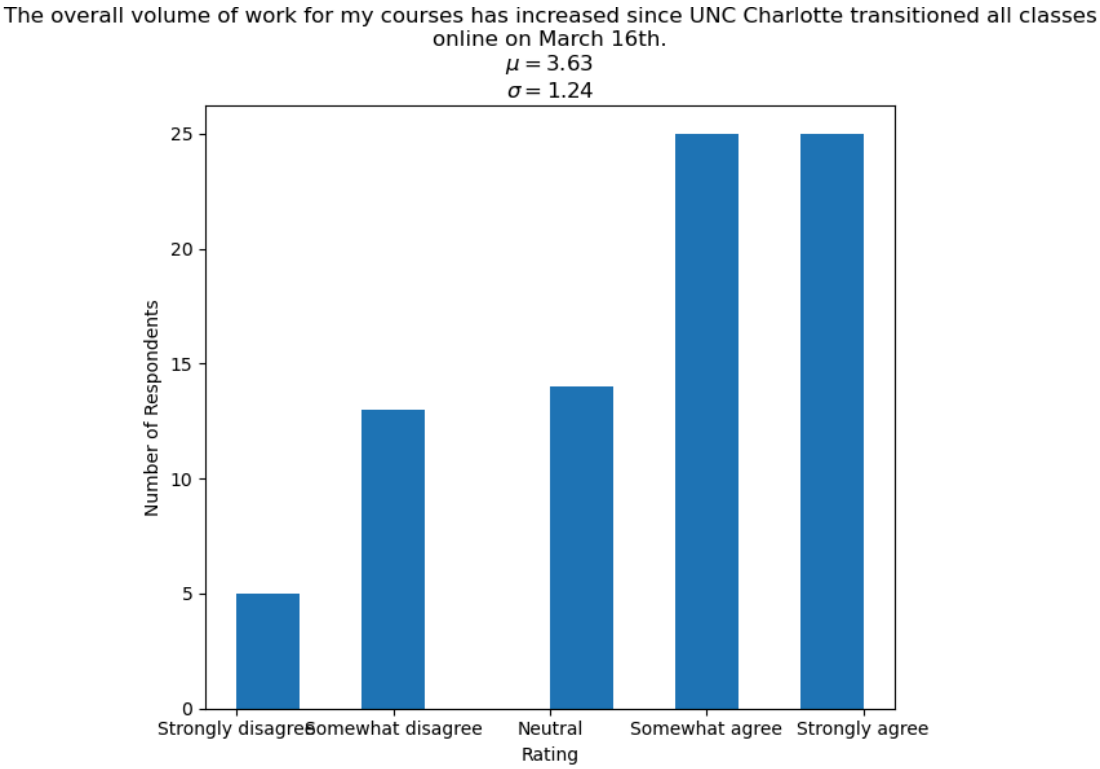


Figure 12: The overall volume of work for my courses has increased since UNC Charlotte transitioned all classes online on march 16th.

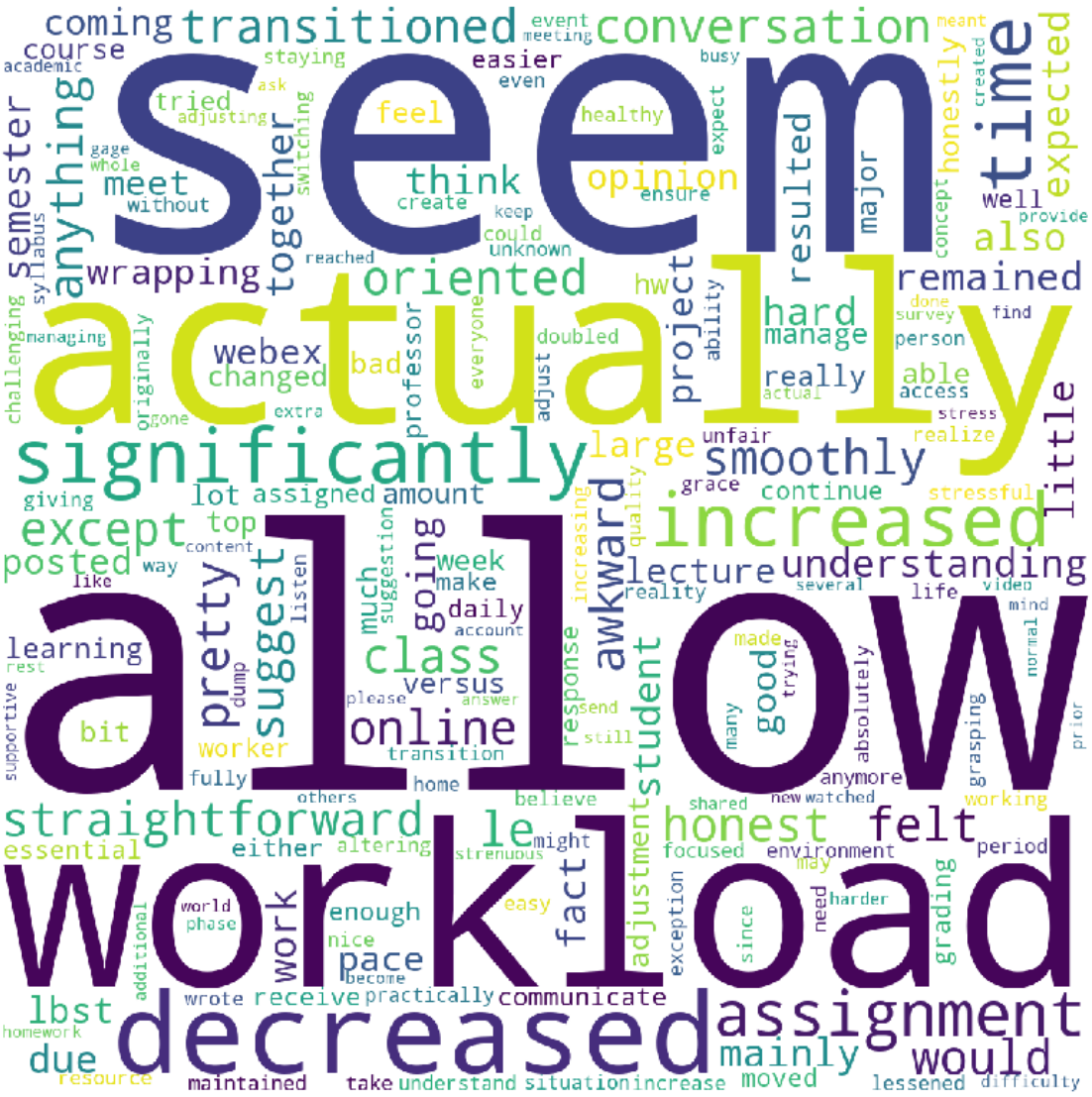


Figure 13: Word cloud for "Describe how your academic workload has changed as a result of the transition to virtual instruction this semester."

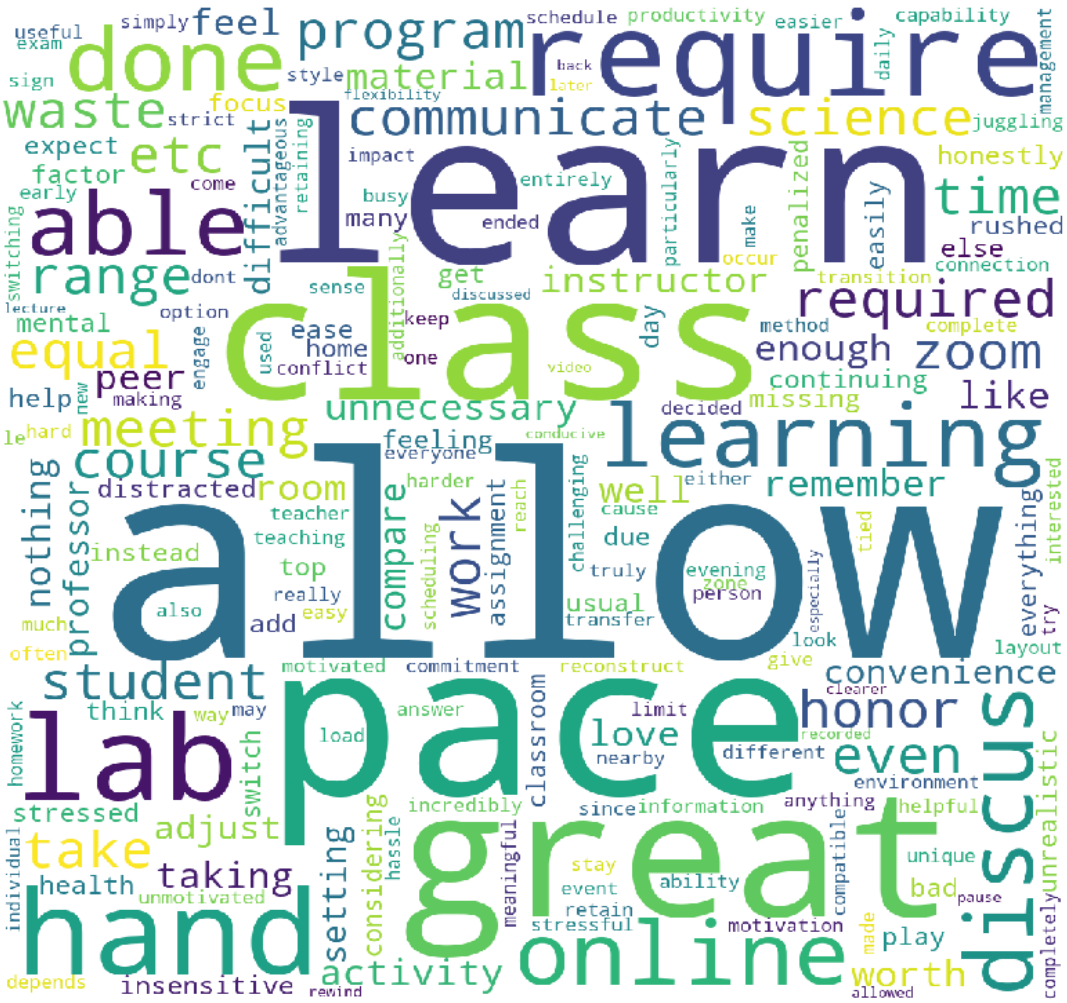


Figure 14: Word cloud for "Explain the impact online courses have on your learning."

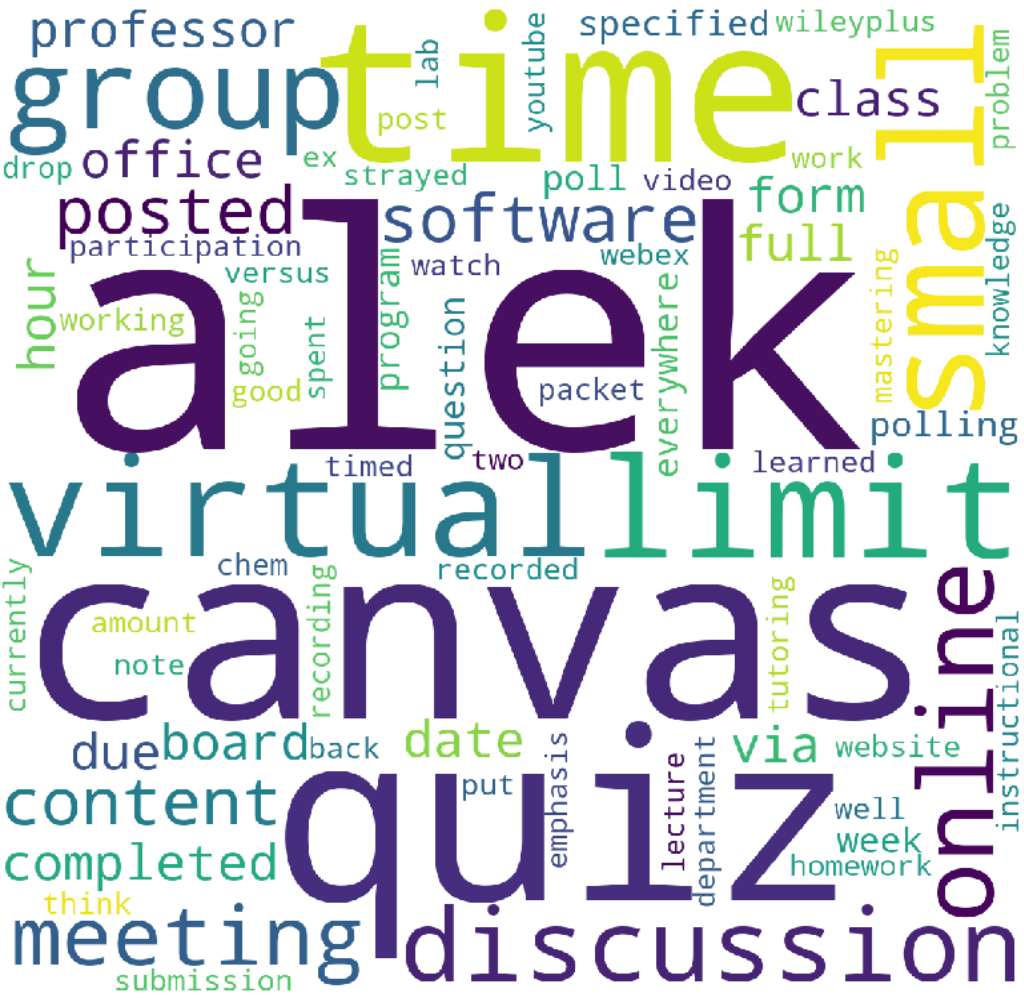


Figure 15: Word cloud for "Which formats do you feel work well for online learning?"