Fall 2020 DAT Student Survey Findings

Introduction

In Fall 2020 the Data Analytics faculty surveyed all students taking courses with DAT prefixes. All course sections but one were offered in the synchronous/remote modality at 6pm on weeknights; the other section was asynchronous/online. We built the survey in response to informal reports from some students that they had taken advantage of the program's move from North Campus in-person to remote/synchronous instruction and the implication that a move back to in-person, even in the absence of COVID-19, might cost these students the opportunity to complete our program. As such, our aim was to determine students' needs and preferences for course offerings in a hypothetical future when COVID-19 is no longer a factor. We asked students, "If COVID-19 were miraculously cured today, how do you feel about these potential locations for courses next semester and beyond?" with ratings on a scale from 1 (very negative) to 5 (very positive); the choices we provided were "weeknight Zoom/remote," "Saturday Zoom/remote," "online (asynchronous)," and "in-person on North Campus - weeknights." We also provided a free-text field in which respondents could suggest other options we should consider and a free-text field where they could add comments about synchronous, asynchronous, and in-person course offerings. Our findings support the conclusion that, for at least long enough to allow the current cohort to graduate, **CCAC Data Analytics courses must continue to be offered synchronously online ("remotely") on weeknights**.

Results

Of the 72 students invited to take the survey, 75% (n=54) responded. Eight self-identified as graduating or otherwise not planning to take further DAT courses. Five were enrolled in the online/asynchronous section. We separated results into all students; all students except those who do not plan to continue; and all students taking the asynchronous course, to determine how feelings varied between these groups. All groups showed a marked preference for synchronous/remote weeknight courses over the other possibilities. Very few students suggested another location or modality in the free-text field; of those who did, Allegheny Campus and a hybrid offering of some kind were the two most popular.

All students

When we look at responses of all students, our respondents overwhelmingly prefer remote/synchronous course delivery compared to any other modality. 43 students report feeling “positive” or “very positive” about weeknight Zoom/remote course offerings, compared to 23 for each of the other options. Conversely, while only four report feeling “negative” or “very negative” about weeknight Zoom/remote, the numbers are 18 for Saturday Zoom/remote and online/asynchronous and 15 for in-person at North Campus, respectively.

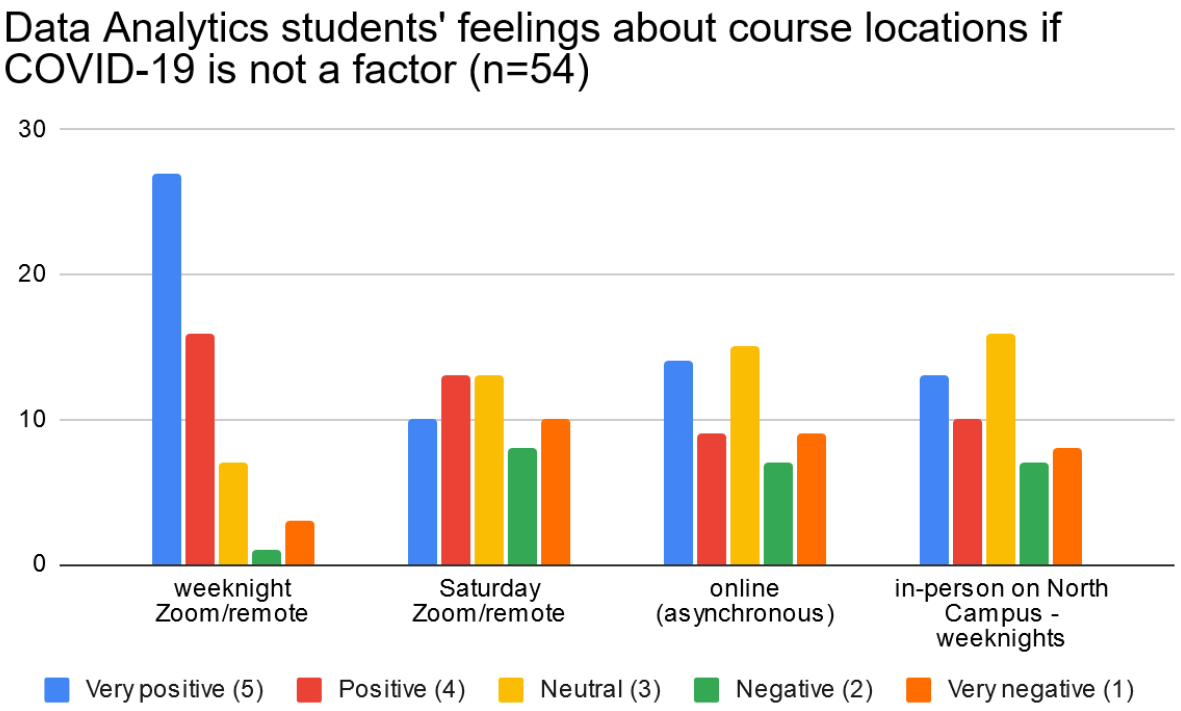

Fig 1. Data analytics students’ feelings about course locations/modalities, aggregate

Location/Modality	weeknight Zoom/remote	Saturday Zoom/remote	online (asynchronous)	in-person on North Campus - weeknights
Average score	4.17	3.09	3.22	3.24

Table 1. Data analytics students’ feelings about course locations/modalities, aggregate

Continuing students

Performing the same analysis after removal of our Fall 2020 graduates and other students indicating no intention to take further Data Analytics courses nets similar results, except that the average score of “weeknight Zoom/remote” is now a full point higher than the average of any other location or modality. Summing “positive” and “very positive” feelings for weeknight Zoom/remote, Saturday Zoom/remote, online/asynchronous, and in-person at North Campus gives us totals of 38, 21, 20, and 20, respectively; doing the same for “negative” and “very negative” gives us 3, 15, 14, and 14, respectively.

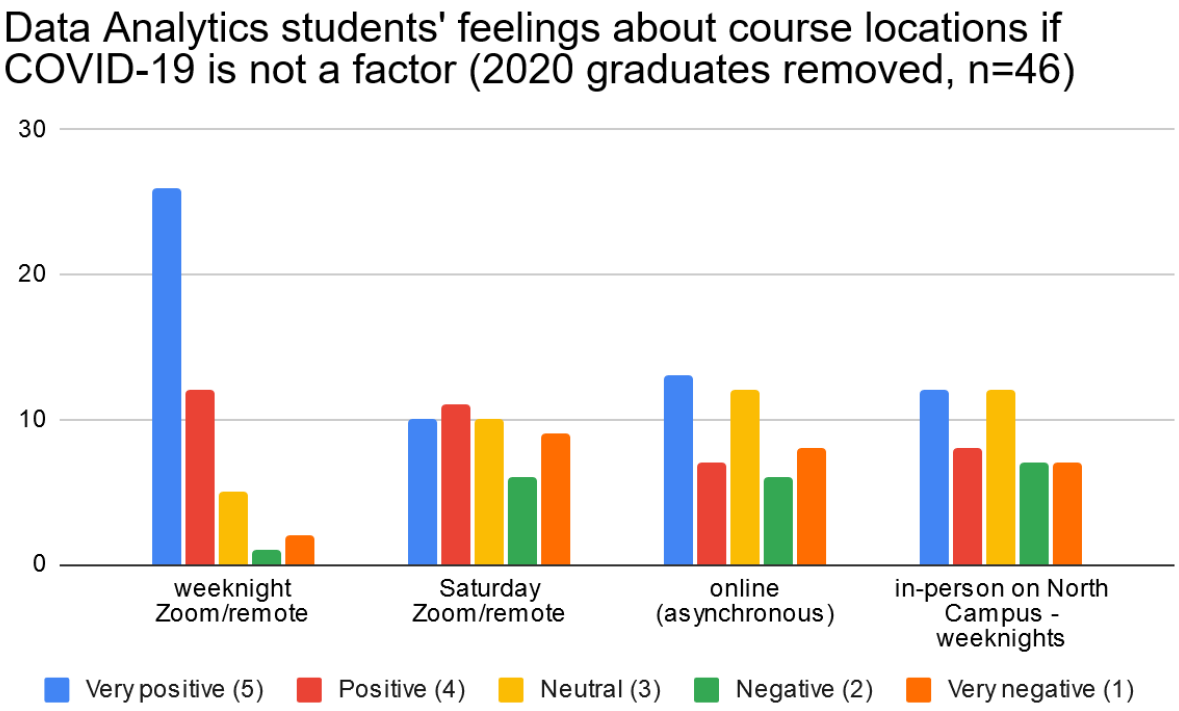

Fig 2. Continuing data analytics students’ feelings about course locations/modalities

Location/Modality	weeknight Zoom/remote	Saturday Zoom/remote	online (asynchronous)	in-person on North Campus - weeknights
Average score	4.28	3.15	3.24	3.24

Table 2. Continuing data analytics students’ feelings about course locations/modalities

Asynchronous students

Although the sample size is small, we believed it might be instructive to consider whether the responses of students taking an asynchronous section differ significantly from the responses of students who are not doing so. The trends are less visibly dramatic, when plotted, but the average scores remain similar. Based on this admittedly small sample, we do not believe students in the asynchronous DAT section feel significantly differently than students in synchronous sections. Despite taking an asynchronous DAT section, themselves, they appear to prefer the synchronous weeknight option at approximately the same ratio as students who are not taking an asynchronous DAT course. None of them express a “negative” or “very negative” feeling about the Zoom/remote weeknight option, and they average out to neutral or slightly above neutral on the other three choices. It is interesting to note that, averages aside, not one of them actually feels “neutral” about the online/asynchronous option.

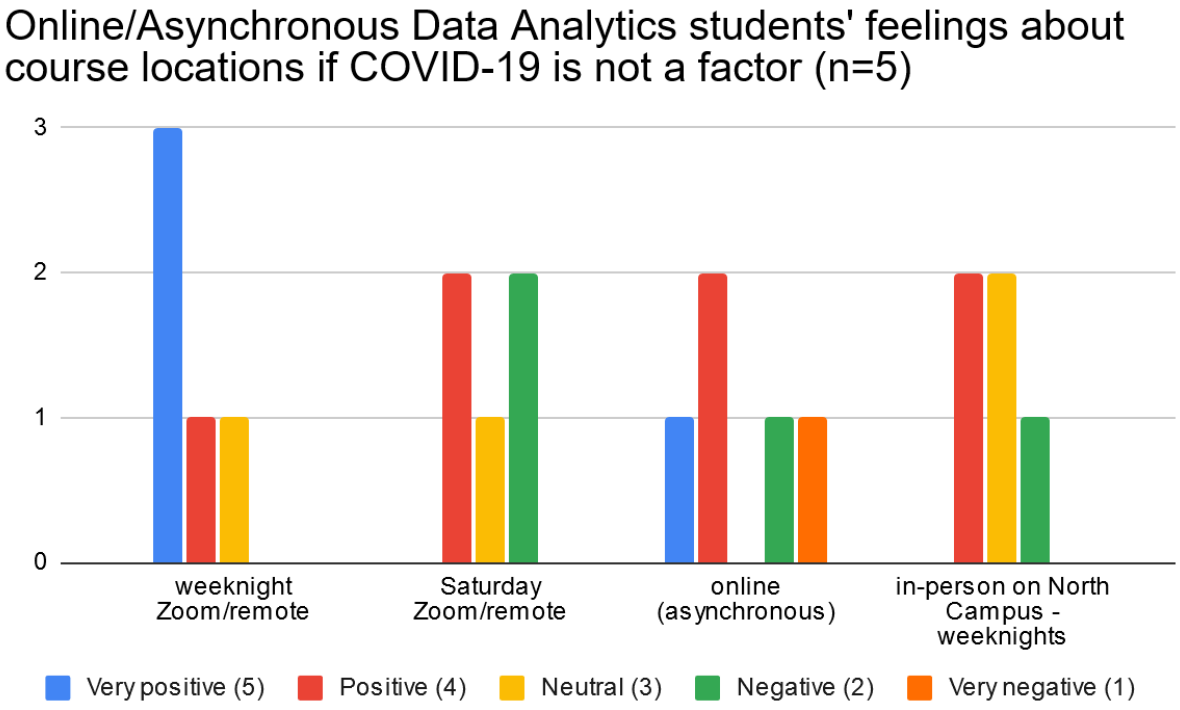

Fig 3. Asynchronous data analytics students’ feelings about course locations/modalities

Location/Modality	weeknight Zoom/remote	Saturday Zoom/remote	online (asynchronous)	in-person on North Campus - weeknights
Average score	4.4	3	3.2	3.2

Table 3. Asynchronous data analytics students’ feelings about course locations/modalities

Free-text field comments

When asked to suggest other locations/modalities for learning, multiple students suggested Allegheny Campus, a variety of hybrid options, and Boyce Campus. Homewood Brushton Center, South Campus, and morning courses at North Campus were each suggested by one student. The suggested hybrid options included remote/online hybrid (1), in-person/online hybrid (1), an unclear answer that might refer to online or to traditional hybrid (1), and a kind of synchronous hybrid with some students attending in-person and some attending remotely by video (1).

Allegheny	5	**Hybrid***	4
Boyce	2	**Homewood Brushton**	1
South	1	**North, a.m.**	1

Table 4. Students' suggestions for other locations/modalities for future data analytics courses

Other student comments are reproduced below:

Getting to this campus by 6:00 PM after a workday is extremely challenging. I can't stress enough how much I prefer online and Zoom options!
I have not had an experience in-person but as long as the course is held remotely over Zoom (synchronous), I personally do not think there is a need to commute and go to the building to receive class.
i really like the Zoom classes w/Slack chats, and almost need the self-paced w/working full time
I liked the in-person courses of course with a pandemic raging that's not possible. Eric and Coral have done an exceptional job adapting to the circumstances.
Remote/Zoom allows for a little more flexibility with my work schedule and since I don't drive and there is not busing to North Campus it is much more convenient to do Remote.
I don't yet have experience with in-person courses at North Campus except that it was going to be a long commute for me. My self-paced online experience of the Python I class this semester was negative. The use of HyperGrade to evaluate assignments allowed no flexibility to see that our code was technically correct if not specifically matched the output details that in many cases came down to placement of spaces. These specific output details would not have been an issue if it were not for the hidden test cases and inconsistent and unclear assignment instructions. My experience with the DAT-102 Zoom class is very positive. It is nice not having the commute and I feel it allowed me to participate more where I might not have otherwise felt as comfortable. There have been some small hiccups while figuring out what works well in the new environment and what doesn't, but these hiccups are expected and I think our Professor has overall pivoted well.
Would like to see Python 3. Would also like to see Python on more with modules, GUI and Website intergration other than just data manipulation
Finding it difficult to learn virtually/Zoom class as opposed to in-person instruction.
In person or zoom doesn't matter as long as I have access to a teacher. Self-paced online is not a good option for me because I have the attention span of a dog and would never do anything

I've learned that synchronous online classes are easier for me than asynchronous online classes. It has been a good substitute for in-person classes. As much as I prefer in-person classes, under the current circumstances it might be wiser to have future courses online until the situation is safe enough for students to return to campus.
Honestly - regardless of Covid, I'd prefer remote or self-paced classes
I personally love remote classes held over Zoom as opposed to in-person because it's a lot easier to focus on the lectures without a bunch of people in class and there's no commute after work
Being in person with the teacher yields better lectures.
Amount learned: in-person >> zoom >> self-paced online
Obviously in-person is better but I steadfastly refuse to risk the health of my peers, my instructors, or myself in order to attend class while the pandemic is still actively infecting and killing people.
Pre-covid I happily attended in-person classes, but post-covid I'm preferring the remote class.

Conclusions

Data Analytics is a fairly new field and a very new offering at CCAC. For now the program is small enough that we can meet student demand by running a single section of almost every course. Python 1 is the exception, needing a second and possibly third section, and there are indications that Python 2 may follow suit. For the bulk of our program, though, we are forced to choose a single time and modality for every course we offer. The results of this survey make clear the need to provide our current cohort of students with a remote/synchronous option or to, as several students have suggested, offer some courses as remote/online hybrids, with a combination of synchronous and asynchronous modules.

What we cannot do is switch our program over to asynchronous online instruction or back to in-person instruction at North Campus before the current cohort has had sufficient time to reach graduation.

A number of students indicated, both in the survey and in conversation with our faculty, that they started our program this semester because it had gone remote. We must continue to gather data and communicate with new and potential students to determine whether our enrollment might grow more quickly if we stay remote, versus returning to in-person instruction at one of CCAC's campuses.

We are beginning an experimental Saturday remote cohort in Spring 2021. While our current cohort of students seems unenthusiastic about the concept of a Saturday remote offering, we hope that this offering might reach a slightly different population, with different preferences. Our intention is to continue the Saturday program remotely (or perhaps via remote-online hybrid) for four semesters, a sufficient time for students to earn the Data Analytics Certificate or, with the addition of other required courses, the Associates degree. We intend to gather data on the needs and preferences of our Saturday cohort, as well.

Appendix A: Possible sources of error

- **Self-selecting sample:** Only students who were paying enough attention to email and who had enough investment in the DAT program to care to respond did so. The quarter of our students who did not respond might also be the quarter who were struggling the most in the online environment.
- **Missing data:** Out of the students enrolled in the asynchronous/online section, only five replied. As such, it is unclear how students taking the asynchronous offering feel about future DAT course modalities. These are the students who would be expected to have the strongest opinion about asynchronous courses, positive or negative, so it is disappointing not to see a higher response rate.

Appendix B: Full survey results

The full results cannot be shared publicly, as several students can be de-anonymized by their answers. Contact Coral Sheldon-Hess (csheldon-hess@ccac.edu), Rebecca DuPont (rdupont@ccac.edu), or Eric Darsow (edarsow@ccac.edu) for access to the full survey results, or appropriately redacted survey results for people outside of CCAC's employ.