

To: Jim La Creta, Chief Information Officer
Mary-Ann Winkelmes, Executive Director for the Center for Teaching and Learning

From: Improvements to Hybrid Teaching Group 2 (Alyssa Canelli, Kim Godsoe, Sarah Halford, Melissa Kosinski-Collins, Anne Marando, Lynne Rosansky, Nathalie Vieux-Gresham, Elaine Wong)

Re: Results of Faculty, Student, and TA Focus Groups

Date: July 17, 2020

Undergraduate and graduate students, faculty, and Teaching Assistants who completed the survey about the transition to Emergency Remote Learning were invited to volunteer to participate in individual interviews or a focus group about their experiences in Spring 2020.

Individual interviews were conducted with five faculty who taught courses ranging from a small language class of less than 10 students to a large science lecture class of more than 200 students (Appendix A). Four focus groups were conducted with approximately 20 total faculty members (Appendix B). Three focus groups were conducted with approximately 16 total undergraduates; one focus group was conducted with three graduate students (Appendix C). Two focus groups were conducted with six teaching assistants (Appendix D). Teaching Assistants who were graduate students also spoke about their experiences as graduate students during the transition to emergency remote learning.

Below are themes that emerged across these three populations. A more comprehensive list of suggestions for effective online teaching can be found in the report entitled Survey Results from the Transition to Emergency Remote Learning which was submitted to you on June 15, 2020.

The committee would like to formally recognize and thank our student representatives for their outstanding contributions to this project. Nathalie Vieux-Gresham co-facilitated the undergraduate focus groups, and authored Appendix A. Sarah Halford facilitated the graduate student focus groups, co-facilitated the TA focus groups, and developed the questions for the interviews and focus groups. Our work was made much richer and better because of their work.

The Importance of Community. All three groups spoke about how much they enjoyed being in a community of learning prior to the shift to emergency remote teaching. Students missed being able to talk to a peer about class materials after the class ended, at lunch, or in spontaneous study sessions in the library. Faculty spoke of the disengagement they felt from students once they returned home. Teaching Assistants recounted a sharp decrease in the use of TA office hours from an in person to an online setting.

Suggestions for improving community in an online format included:

- Prior to the start of classes, meet with students in small groups. Much like having coffee with a group of students at the start of an in-person term, these small group meetings help to develop a bond between students and the faculty members as well as between students. An instructor may want to keep these same cohorts of students together in break out rooms and/or working on group projects.

- Start each class with a moment that personalizes the experience. One instructor spoke about having a different background picture of places she had traveled every day in her Zoom class. Students were told to use chat to guess the location. Another instructor purposefully shared something from her home life and asked students to take turns doing the same. A student commented that yet another instructor always posted pictures of her pets at random times saying things related to the course material during class which made the instructor seem less intimidating and kept the students engaged as they knew there would be surprising and fun moments in the lecture.
- Provide emotional support, both around the pandemic and current events. One faculty member spoke about how in one of the first online courses, he said to the class, “Let’s be honest, this just sucks.” He talked about how he has been more emotionally open during online instruction than he would have been during normal in-person teaching. Students expressed how much they wanted and appreciated when faculty members stopped teaching the normal course content to address topics such as racial injustice, police brutality, and Black Lives Matter. They thought this was particularly important because we as a community are physically isolated and need opportunities to talk through what is happening in the United States and the world.
- Students in IBS praised the school’s use of Slack to create a virtual, real time community for students that also allowed students in other countries and time zones to participate.

Setting, Communicating, and Following Through on Expectations for the Class. The transition to remote online learning happened quickly with only days for faculty to plan for teaching remotely and for students to move home or to decide to stay on or near campus. Both TA’s and students shared that the classes that were the most successful were ones that set clear expectations for attendance, individual participation, group participation, office hours, and grading. When there were not clear expectations, students reported becoming disengaged from the course material.

Suggestions for maintaining high expectations:

- Use the first class to review a written set of expectations for online learning that are part of the syllabus. These expectations should include the role of the faculty versus the TA, attendance, office hours, and how individual and group participation will be measured and graded.
- Students, faculty, and TAs expressed frustration at students who turned off the video feature during Zoom meetings. Faculty need to communicate clear expectations that the video should be on during class as well as determine when an exception to this rule will be made. If a student cannot access video, other means of participation such as the chat feature can be used as a substitute measure to demonstrate engagement.
- Students are often confused about the difference between synchronous and asynchronous instruction and how to stay involved in asynchronous instruction.
- One graduate student described how helpful it was for the instructor to use the last in-person class to demonstrate the Zoom and Latte features that the class would be expected to know once the class shifted to a remote format. A faculty member ensured that students knew how to send homework via jpg photos by teaching every student which app to use on their cell phones.
- Students said that in an emergency remote learning environment, it was harder to remember when assignments were due and how to prep for class. They appreciated additional communication from their faculty members about how to engage with the homework between

classes as well as upcoming paper and exam dates. Using LATTE course announcements enabled all reminders and updates to be located in one place.

- Students asked for additional office hours, both in the traditional drop-in format and by appointment. Some students expressed reluctance to ask for additional times because they were concerned that faculty members were already busy with online teaching and family life. Some faculty members reported being overwhelmed by requests for office hours while others thought they may use Zoom office hours and waiting rooms in the future even if we are in an all in-person teaching environment.

Engage in New Modalities for Teaching. Undergraduate and graduate students expressed boredom and a lack of engagement when lecture classes were simply hosted in an online format without opportunities for discussion or interaction with the professor. When students are physically on campus and they attend a lecture, they can use their out of classroom time to discuss ideas and build community. In an online forum, the lecture format felt isolating. Graduate students who had classes which already had a hybrid of lecture, group work, and case studies felt that these courses successfully moved to an online environment.

Suggestions for New Modalities for Teaching:

- Do not have three-hour classes even at the graduate level and even for PhD students. All students—undergraduate and graduate students—described three-hour classes in an online format as having little if any educational value. They repeatedly stated that by the end of the second hour, they were no longer engaged with the material, and were often looking at web searches, their cell phone, or turning off the video to do household chores.
- Students appreciated when lectures were recorded and class time was used to build community and work on problem-solving exercises. Students said that they liked being able to go back to the recorded lecture and replay segments that discussed difficult comments. Similarly, they enjoyed when class included case studies, shared editing on a google document, and real-time problem solving.
- Students, faculty and TAs recognized the importance of break out rooms, but also noted that they had to be highly structured in order to be effective. A break out room should be charged with an assignment (not just discussion), people in the room should have assigned roles in completing the assignment to assure participation, the faculty member should randomly visit break out rooms in order to make sure the work is being done, and if possible, break out rooms should be moderated by a TA.
- Faculty members and TAs said that one of the most effective methods for online learning is when the instructor was teaching the class, and the TA was moderating chat, questions, and communicating with the instructor what was happening behind the scenes. Doing so resulted in a learning experience that most closely replicated in-person instruction.
- TAs suggested faculty members incentivizing student attendance at office hours and recitation sections as a way to make sure the students understand subject matter and build community. Students suggested being assigned to peer study groups (with methods of accountability) to mimic the in-person learning environment and build community.
- Students spoke about how exciting and engaging guest lectures were from speakers who were able to attend from different locales via Zoom. They suggested using Zoom to facilitate guest lectures even when we return to in person teaching.

Recognize that teaching technologies will need to reflect the reality of different disciplines. Faculty expressed difficulties that online teaching advice is often reflective of lecture and discussion courses, not courses in music, studio arts, and theater arts. A graduate student in a problem-solving discipline noted how hard it was to replicate the feeling of working on a problem on a large board with her cohort.

Suggestions for teaching technologies:

- Some disciplines would benefit from faculty and students having not just a desktop or a laptop but a tablet as this was the most efficient way to teach the material. Other disciplines need two computers with camera functions in order to teach: one monitor is with the class while the second monitor is showing how to create a piece of art or solve a multi-step problem.
- Students, faculty, and TAs praised the use of polling, screen sharing, Latte discussion forums, Google forms, and using programs like Perusall. Faculty asked if polling could keep track of who is participating, and unfortunately, this is not a viable feature of the program. The chat function can be used, but this requires someone to save the chat and manually look for and record participation which is labor intensive for a faculty member or a TA.
- The university should allow students to apply for emergency funds to purchase cameras if their computers do not have them as a built-in feature.
- All materials should be fully accessible to ensure that students with documented disabilities can access the content.

Define the role and responsibilities of graduate and undergraduate TAs. There was a lot of confusion about TAs both from those serving in the role and from undergraduate students regarding what the responsibilities of a TA are.

Suggestions for TAs:

- TAs asked for greater clarification about the nature and scope of their role. Some felt that their job duties lessened in an online environment because of a lack of student engagement. Others felt that faculty members disappeared after the switch to emergency remote learning, and they were responsible for maintaining the learning environment. Just as we recommend a written list of guidelines for class expectations, we recommend a written list of guidelines for TA expectations.
- Undergraduate TAs expressed confusion with regards to what an undergraduate TA did, what a graduate TA did, and how these roles were similar or different. A number of undergraduate students believed that their undergraduate peers who were TAs were grading their work, and they were very uncomfortable with this practice.
- When graduate students serve as TAs, undergraduates asked that the TA explain more about themselves, their research, and why they were attending graduate school. They thought that this would enable graduate TAs to also be role models for students.

Ask for Feedback. Faculty and TAs said that real time feedback from students was very valuable in modifying their teaching techniques. Students appreciated the opportunity to give feedback and felt like it made the course a joint learning experience. A weekly feedback mechanism (3 questions in a google form) was an easy method for providing important information about what instructional methods were working best.

Students also wanted a place to anonymously report both faculty who were outstanding at online teaching as well as concerns about teaching when these occurred. Many students praised their faculty members by name for the outstanding job they did in transitioning to emergency remote learning. One student reported that a faculty member had replaced lectures with Youtube videos; another student spoke about the jarring change from synchronous to asynchronous learning; another student described a lack of office hours. The ability to give feedback is important to students, and they would like to have both real time options as well as the standard end of the term course evaluation.

Other Takeaways.

- Several administrative offices were praised for functioning well in an online environment including the Waltham Group, the Department of Spiritual Life, Academic Services, ISSO and the Registrar's Office.
- Some students raised concerns about accessing online health and/or counseling support, particularly in small residential spaces with little or no privacy.
- Because the number of on campus jobs will be limited, financial aid will need to be increased. It would be helpful if Hiatt could help students find remote paid internships for the fall to help offset the work portion of financial aid packages.
- The university should be as timely, efficient and consistent with its messaging and plans as possible. When plans and decisions are made for classes, programs and/or departments, the university should inform the broader community quickly and uniformly.

Appendix A: Faculty Interviews

Faculty Interviews

Faculty A	Intro Language Course	Class size: 6-20
Faculty B	Advanced Science Elective	Class size: 27-50
Faculty C	Large Intro-Science Course	Class size: 45-250
Faculty D	Social Science Course	Class size: 70-100
Faculty E	Business Course	Class size: 18-100

Prior to remote teaching – what was the most enjoyable/fulfilling aspect about teaching for you?

Faculty A - Faculty enjoys most their connections with students, which they were able to maintain when pivoting to the online environment. Yes, pivot was stressful and on short notice, but they invested a lot of time in the switch to an online final project that went very well.

Faculty B - Faculty liked getting to know their students on a personal level and helping them progress; they felt they were able to keep doing this even in the remote environment.

Faculty C- Faculty favorite part of teaching was interacting with their students. They liked walking around while they are in lab or in class and talking to them directly. They felt like this was the way they got to know students in a class of 250. They did worry about how they will make a connection with the students in the fall in such a large class. They felt like teaching online both after the switch and this summer has been very impersonal.

Faculty D - Faculty feels teaching is the privilege of sharing and crafting a lecture for his class. Working from a classroom has always provided that for him and his students.

Faculty E – Faculty reported that the most valuable aspect of their class is the rapport and engagement that they can establish between herself and their students as well as among the students themselves. This rapport provides a foundation for deep intellectual exploration of multiple perspectives and points of view. They feel “blessed that we moved online partway through semester because we had had enough time in the early part of the semester to establish rapport and so we could move online without a hiccup...” They also reported that they had sufficient ‘warning’ so that they were able to set expectations for their students that the class would be going online and begin to let them know what this would mean for them. There were a few syllabus tweaks that had to be made such as a guest speaker cancellation. They reported that they “was a little more flexible than usual.” Tried to create some time for ‘chit chat’ before the zoom class began and other times. Some aspects of an in-person case-based class do not work online 1. Online class participation does not work nearly as well as in person. There is less prep and less participation going on. In their words: “Students did not think I would call on them online. I tried but it was harder because I could not see all the faces in the zoom screen – particularly if I was ‘screensharing.’” A number of students said they missed ‘the place’ and

were out of sync with the learning goals. A few students found themselves in tough circumstances. One was a no show. When faculty was probed, they discovered he was overwhelmed (from Africa) and feeling isolated.

Were you able to maintain this enjoyable teaching experience online?

Faculty A - Faculty used an Ipad and Ipad pencil as replacement for a blackboard. They also purchased the Notability app for \$9 which facilitated use of the Ipad. Zoom breakout rooms worked well for speaking practice, as with their small class, faculty was able to visit each room and see how students were doing. Right before the pivot was announced, faculty prepared all their students for moving to an online environment. Before students departed, they asked students to bring their laptops and offered two demonstrations on how to use various software (teaching students how to share screens with the class; how to download the scan app on their phones to send her homework). Faculty also led them in a discussion of "What if... you can't do this or that? What do you think we should do if....? Students were good at helping their peer's problem solve technology issues. They knew how to find information needed. While faculty could use the Ipad to write in language, the students could not and couldn't "type" language either. Faculty printed out and distributed all the handouts for the rest of the semester so that students didn't need access to printers but could scan completed homework.

Faculty B- Faculty tried a lot of things. Faculty told their students they would be experimenting and asked students for advice on what was and was not working. Before each class would begin, faculty would provide all students in advance with a worksheet for the day's lesson, which faculty would then discuss with the entire class, calling on each of the students in turn to verbally work through a problem (all brief, short answers from students) with faculty, which faculty would annotate on a shared screen by using their Ipad and Apple pencil, in place of the discipline tradition of using a chalkboard. The students all had the expectation that they would be called on. Faculty had the impression that students who were shyer found that the remote environment made it easier to respond (they weren't looking at their peers sitting next to them, but at the shared screen). When soliciting feedback, only one student told faculty student was uncomfortable being called on. Students appreciated that faculty was not just running through a lot of PowerPoint slides. Zoom breakout rooms didn't work for faculty, because they could only be in one breakout room at a time, and it was harder to see who was struggling.

Faculty C- Faculty felt like office hours don't work quite right online. Faculty has tried both one on one appointments and having open times where everyone could attend. In the open groups no one comes, and one on one appointments are rarely made and take 30+ minutes each. It is not time effective. Faculty is concerned about this going forward.

Faculty D – Faculty was able to recreate the sharing in an online situation although there is a certain charge of atmosphere in the classroom is that is very difficult to get remotely. Faculty's lectures did change to get across the feeling that one cares deeply about something and the sense of others.

Faculty E – Faculty played with zoom's break-out rooms. "I learned that if students have not prepared and get sent to break-out...they look at each other... and it does not work. I had 4-5 team breakouts. One was amazing and 1 TERRIBLE (did not do the work).. a couple in the middle. The lesson for using break-out rooms effectively is to let the students know in advance that they will be required to engage in this small group work.

Can you think of an example of an activity or teaching technique that you used that was effective at keeping your students engaged in the online classroom?

Faculty A - Faculty substituted an online game night in place of an annual in-person celebration called Hafla. Faculty created an assignment to learn, teach and play an Arabic game, which then became a classroom activity, then was offered at the out of class event (well attended and enjoyed by students). If fully online, faculty would create more than one out of class event to build community.

In a new class, faculty would use icebreakers such as giving students three questions (in writing) to discuss in breakout rooms, and to report back to the entire class. They'd put students into different groups for other questions.

Faculty B - One of the advantages is that faculty were able to meet in person and establish relationships in person. This was an OC class, and faculty had already given them feedback on their first presentation, and had a relationship with each student, which he tried to maintain. He also shared his struggles in trying to transition to remote teaching, making himself vulnerable. The first weeks were very hard, and he was completely exhausted as teaching online felt like shouting at a wall. Sharing his struggles was an act of self-preservation. For a new class, they would encourage faculty to meet one on one with the students. Zoom one on one meetings are more time consuming and less rewarding but help to get students to attend office hours.

Faculty C - Echo360 and faculty ipad were absolutely crucial to their teaching. Based on student feedback, faculty is likely going to keep their class asynchronous.

Faculty D - Faculty tried to intersperse what was being discussed with some specific questions, which promoted participation. Lecturing for 10- 15 minutes there was a chance of losing students, so preparation of specific questions was helpful. Shared screen with slides with discussion breaks was featured in faculty's class. Faculty allowed follow-up where students would reach out with comments after class which was appreciated. Going forward faculty would use Whiteboard much more in preparing students with information to discuss in class or group email questions being presented to excite them for participation. Faculty held zoom office hours and will continue to use them. Faculty used the waiting room application and did not schedule time with students which worked for them. Holding zoom office hours in the evening hours to incorporate those students who were living in varied time zones was very helpful.

Faculty E - In person for a while was important. Faculty had group projects and teams worked as well as it would have worked had faculty been in person... Research the case yourself and you need to stand and deliver... they get training in presentation and most try to use PP as a guide and speak from knowledge...v. online... 99% read a script.... Too easy to read a script.... = less good as in person.

What resources did your department provide that were most useful to you?

Faculty A - Before the pivot, Faculty asked their department administrator to purchase the IPad, which the chair approved, and purchased from departmental operating expenses. Several faculties were able to obtain IPads in this way, and were used by not only language instructors, but also literature and philosophy professors.

Faculty B - Before the pivot, Faculty bought an Ipad and pencil using their startup funds. During the first week of June, a colleague gave a post remote learning presentation to the department, sharing what worked for her, and suggesting that all faculty utilize the Ipad, pencil and Notability app.

Faculty C – N/A

Faculty D - Faculty communicated that the department did not have much to offer in support, but he found the CTL and Library hugely helpful. Faculty did mention from CTL, Tim Hickey and Mary-Ann Winkelmes as very supportive. Within the library Faculty often found help when needed from Laura Hibbler and Amy Slater.

Faculty E - Faculty and department had meetings and shared and talked, trying to be supportive of each other. Had TA for each class but one could not come to class. Other TA recorded participation. Next time should make TA the co-host so TA could do that as well.

How did your expectations of your TAs change or stay the same when we transitioned to the online format?

Faculty A – N/A

Faculty B - Faculty had a TA, whose primary role was helping students prepare for their OC assignments (presenting a paper they had read). Faculty asked their TA to do less after the pivot, taking on more of the load in preparing students for their Zoom class presentations. Faculty heard from graduate students that other faculty asked their TAs to take on more of the work and grading after the pivot. Faculty's TA did step in and give the oral presentation for one of the students who was too stressed out to present at the time (student had a makeup presentation later). The student appreciated this flexibility and it all worked out well, as the TA modeled what a good presentation in the new Zoom environment looked like. This is also an example of how faculty would help student's problem solve their situations.

Faculty C - Grading was a challenge and to effectively grade with TAs using Latte, faculty is hoping they will develop a feature that allows two people to be grading the same document simultaneously. It would help with training and consistency. Faculty thinks Gradescope would be a good thing if it could be made compatible with Latte. Faculty thinks TA training needs to be consistent and happen every week throughout the semester so faculty and their TAs can respond to issues in real time. Faculty thinks TA training needs to be consistent and happen every week throughout the semester so faculty and their TAs can respond to issues in real time.

Faculty D - Faculty's use of TAs in the 2020 Spring semester was for grading papers only. Come fall faculty's TAs will be teaching classes and faculty feels they would need to have proper training on all platforms.

Faculty E - A little but within limits of what TAs could/would do. Faculty were bound by the expectations that were set at the beginning of the semester. Generally, there should be better tech support during the online sessions and a TA could do this so that the faculty member is not trying to allow students in as well as manage the discussion.

Communication with the university: What can the university do to communicate better with faculty? What resources or training would you need from the university?

Faculty A - Faculty enjoyed the check-ins with the provost, dean, and president, in town halls, "office hours" and at the faculty meeting. Faculty would like them all to be recorded and posted (they lost their connection at the end of one meeting). Faculty liked getting clear emails from senior administration and being informed as early as possible about not only what had been determined, but what was being considered.

Faculty B - Faculty asks senior administration to be more decisive, faster. They and the students appreciated the flexibility, but it's better to know that there might be this flexibility earlier.

Faculty C - The hardest thing for faculty was dealing with the number of times the university changed their plans. Faculty understands why the plan changed so many times, but they mentioned that it was particularly challenging teaching a large class and a lab class and having to change direction so many times.

Faculty D - Faculty felt the university did a fine job in communicating given the timing of turning to online. They feel more training is always needed to best assist faculty and TAs in resourcing all avenues of online tools. Some of which faculty had not heard of for example: Perusall and VoiceThread

Faculty E - Doing a great job... have not had the CTL training yet so they don't know. Everyone is chomping at the bit for a decision to be made so we can plan. Faculty understand the need to wait to drop dead date, but faculty want to know what/how to prepare for Fall. Need to start working toward organizing for Fall. Committee at IBS with Linda Bui to survey contract and adjunct faculty. They have LOTS of concerns... how comfortable coming to campus pre-vaccine...NOT AT ALL..... lots of concern.

Are there any other recommendations that you'd like to make were not covered?

Faculty A - It's important for first semester language classes to be in person so that faculty can create community and get to know their students. Also, the earlier that administrative decisions can be communicated, the better. Faculty need to know what is happening to be able to plan ahead.

Faculty B- For the big transitions, students and faculty both needed more time. The lack of a real break (time to prepare) when classes went remote was difficult for everyone. The move off campus was difficult for students, but faculty was glad that some students could stay on campus. In terms of planning for the fall, the more notice the better. Having a real break during an academic semester is also important. Faculty is proud to be part of an institution that clearly cared about its students and aimed to be compassionate. Students need more technical equipment and support. Faculty had students who kept cutting out, which makes it harder to fully participate. Faculty had an Ipad but the students would have to draw on a piece of paper.

Faculty C- Faculty hopes if we make a plan for the fall, we can be consistent and stick to it.

Faculty D - Faculty spoke of teaching online as one they readily accept. Given Faculty's spring semester experience, they can support and teach with far more ease than this past semester. Faculty expressed nervousness in working with zoom and online classes and after their experience with online teaching they felt that would not be to the level it was in the spring. Faculty specifically spoke to being able to use their office for online classes. Working remotely had increased network challenges.

Faculty E - IDEAS for better online instruction: Establish rapport with students before online starts is important and faculty expect to try to recreate this. Probably will make a video introduction of myself and request videos from each student in the class. Set up individual meetings (70 plus students) 15-20 mins so faculty get a personal rapport... they have spoken to faculty and they know something about them... faculty can replicate the enthusiasm in engaging in debate. Ying and Yang in each case study.... faculty thought it would set up homework assignment by assigning roles (opposites)...get to know the students... push this with some more directive assignments. Break the 'formulaic' pattern of more traditional online courses... generally no debate... and not intellectually rigorous...

Appendix B: Faculty Focus Groups

Brandeis University faculty are passionate about their students' experience both inside and outside of the classroom and are the core of the Brandeis community. Brandeis faculty are more than willing to go the extra mile to support their students, enhancing their experiences at Brandeis. Faculty members enjoy building both a classroom community and individual connection with their students, so that they may provide more than simply knowledge of a topic. Whether it is in class or grabbing lunch, Brandeis faculty enjoy interacting with and understanding students such that they can make an impact on them, even well beyond their course.

I. Maintaining community while online

Maintaining community engagement was one of the primary concerns of faculty members during the transition to online learning. In order to remedy this, faculty used the following methods, activities, teaching techniques, and Zoom/Latte functions to maintain in-class engagement:

- Breakout rooms
- Polling (via Zoom or Echo 360)
- Screen-sharing with an external device (i.e. using an iPad and pencil as a whiteboard)
- PowerPoints with creative visual elements
- Chat function
- Warm-up activities before the lesson
- Zoom office hours
- Checking in with students
- Problem-solving technical issues with students
- Sharing more about their own backgrounds
- Seeking feedback along the way

Faculty often noted that the screen-sharing function between an iPad with Notability, a notetaking software, allowed for them to easily display and annotate PowerPoints during their class session. This allowed many professors to keep their students engaged with the visual techniques that a whiteboard would provide during an in-person class.

In between class hours, faculty members used the following methods to maintain connectivity and accessibility with students:

- Latte discussion forum
- Recitations and group office hours
- Individual office hours/appointments
- Latte course announcements
- Google forms
- Perusall

Faculty members noted that the Latte discussion forums were especially helpful both for channeling questions or comments towards themselves and/or TAs and allowing for students to self-facilitate discussions among themselves. Google forms were also utilized to ask questions of

themselves or the TAs. Google forms also served to occasionally and anonymously provide feedback or comments to them as well.

II. Expectations with TAs during online learning

Many faculty expressed the usefulness of having a teacher's assistant (TA) present, both in-class on zoom and on Latte. TAs were especially useful for the transition to online learning and assisting with technological adjustments for the class.

TAs are commonly responsible for grading assignments, holding office hours, facilitating recitations, managing online forums, checking for attendance and participation, and receiving feedback regarding the instructor and the course. The transition during online learning amplified their responsibilities, as there was a higher need for utilizing functions of Zoom and Latte. Therefore, TAs prioritized managing their Latte's discussion forums or attending to the chat function during class time.

III. Communications with departments and the University

Faculty had mostly positive feedback regarding communication from their respective departments and the university. They often noted that communications from the university was consistent and sufficient, as resources and procedures for progressing with the semester were provided when necessary.

On the other hand, some faculty members described that their respective departments did not have meetings regarding guidelines for classes, online technologies, or pedagogical approaches to online learning. Moreover, there were instances when students seemed to understand some information before their professors did. This discrepancy in the distribution of knowledge is a result of inconsistent communication between departments, or from the university to departments.

IV. Resources provided by the University

Technological support from the university was often composed of emails informing faculty members and staff explaining Zoom and Latte functions. Esther Brandon, a digital literacy specialist within the Research and Instruction Services department, was notably useful for providing guidance about Zoom and Latte functions prior and during online learning.

The Brandeis VPN, Pulse Secure, proved to be extremely useful for all students, notably international students, for accessing Brandeis's online resources.

V. Potential Improvements

Technological Support: Faculty members expressed that while Zoom and Latte proved useful for the online learning environment, there were some difficulties with certain functions. Technological trainings and in-depth tutorial workshops from ITS to prepare for hybrid would be helpful.

Faculty members also considered the pedagogical side to the technology used for online learning. They stated that receiving some pedagogical guidance from Center of Teaching and Learning (CTL) staff would be extremely beneficial to learning how to maintain an accessible and equitable class environment.

Some professors noted that although the university's VPN, Pulse Secure, was useful for accessing Brandeis's online resources, it may prove inefficient to use it as a primary VPN. It is recommended that ITS supplement this VPN with an alternative to access the university's cloud.

A document camera with a whiteboard or an iPad/pencil with notability was a popular choice of technology for many faculty members. Those faculty members found that those combinations were more useful to use than Zoom's annotation function. These same faculty members expressed that TAs should also be provided with this technology for recitations or group office hours.

Roles of the TAs/PAs: The number of TAs per class should be proportional to the number of students present within the class on the call. For every 20 students in a class, a TA should be present. TAs as digital/tech assistants would be exceptionally helpful for Zoom and Latte functions, managing feedback or comments directed towards the TAs or faculty via Google forms, and managing the chat or raise hand function during a zoom call.

If in-class participation is part of the course overall grade breakdown. TAs should also be utilized to check for attendance to zoom lectures if the courses are synchronous.

VI. Miscellaneous comments, suggestions, or feedback

Faculty members proposed that, in the case of an occurrence such as the COVID-19 outbreak or the current events surrounding the recent chapter of the Black Lives Matter movement, they should be willing to address some of these issues briefly in a synchronous class. They suggested that faculty members should not continue to teach material or attempt to engage with students without understanding how certain circumstances could affect students' mental or emotional health, which in turn could affect their in-class performance. If not in class, faculty members should be willing to check-in and engage with their students or be open to having slightly extended office hour time to address their students' needs, whether that need relates to the class or otherwise.

In order to build a community prior to the beginning of the semester, faculty should consider having a coffee talk or smaller group meetings with students so that the faculty can meet and introduce themselves to the students. This will personalize the faculty member to the students, making them more comfortable when engaging in the course and connecting with the faculty member in an online format.

Colleagues should exchange and review each other's syllabi, either original or adjusted version for online learning, to gain inspiration and guidance as to how they can potentially build a course suitable for a hybrid education environment. Departments, or the university, should also provide a compilation of resources and online teaching tips that may prove useful for the fall, along with adequate training.

Professors should be able to decide whether or not they will teach synchronously or asynchronously.

Appendix C: Undergraduate and Graduate Student Focus Groups

In all of the focus groups, students expressed how much they missed learning with their peers both formally and informally. The classroom environment was difficult to recreate using Zoom and Latte though some faculty were extremely skilled at doing so. Several undergraduate and graduate students lamented a lack of formal course evaluations because they felt that their faculty had truly excelled in the transition, and they wanted to praise their efforts. Undergraduate students spoke about how they missed the informal aspects of their education—seeing a peer in the library and asking a question or being so excited by a topic that they and a classmate would go to lunch together to continue their discussion of an issue that was raised in class. Graduate students, particularly PhD students, felt a loss of connection with their cohort, and they missed the informal learning that came from their graduate student peers. As one graduate student said, she missed being together in a room with her peers struggling with a difficult concept, and everyone contributing in order to come up with a collective answer. Students also missed the close relationship that they had with their faculty members and the excitement that they created in an in person learning environment. They missed hearing about a faculty member's research and career path.

- I. **Developing a Sense of Community.** Students appreciated when faculty members actively tried to develop a sense of community in their classes. They noted that this was easier to achieve with synchronous classes than asynchronous classes, while recognizing that asynchronous classes did not work for everyone. Suggestions for developing a sense of community included:
 - Students liked when faculty members shared things about themselves including introducing students to their families, talking about hobbies, or showing an object in their home
 - Humor went a long way with regards to engagement. One faculty member interspersed pictures of her cats discussing concepts from a class at different parts of her Powerpoint slides.
 - How class was structured contributed to or detracted from a sense of community. Classes that emphasized structured interactions with one's peers were the most effective at both promoting student learning and developing a sense of community.
 - Students appreciated proactive communication from their faculty members that focused not only on the upcoming coursework but students' well being.
 - Students indicated that when there were major current events (a surge in the virus, racial violence, police brutality), they appreciated faculty members discussing it in class even if the subject of the class was unrelated to what was happening.
- II. **Useful Teaching Techniques:** Students said that the classes that were least effective in an emergency remote learning environment were those that heavily relied on long lectures. Students

reported watching lectures at increased speed, leaving lectures to do other activities, and finding themselves unmotivated and unengaged. Suggestions for effective teaching techniques included:

- Using class time in a highly structured way that alternated between small segments of lecture and the application of concepts through problem solving, group work with defined roles and outcomes, case studies, and practice quiz questions in which students could test their knowledge in real time
- Smaller classes (15-25) worked best in an online forum. It was easier to become lost in larger classes.
- Students liked having lectures recorded so they could revisit difficult concepts
- The use of screen share (by faculty and by students), google forms/surveys, the Zoom chat function, discussion posts and group editing on shared documents was praised
- Students shared mixed opinions about breakout rooms. When students were simply sent to a breakout room to discuss a topic amongst themselves, many students did not participate or felt like there was no point to the assignment. When students were sent to a breakout room and given specific roles, an assignment that they would have to report back on to the class, and there was a sense of accountability, students enjoyed the breakout room function.
- Students requested that faculty drop in on different breakout rooms in order to see the level of participation and to hold students accountable for the work.
- Students also enjoyed group projects as long as there was accountability for each team member and for the project as a whole. Many students said that group work helped replicate the sense of comradery that made in person teaching so effective.
- Students asked if faculty could assign study groups with formal expectations and outcomes, so students are required to work together. This would help replicate the in person learning environment.
- Students appreciated when faculty moderated discussions such that more talkative students were instructed to give other students a turn and more shy students were invited into the conversation
- Students praised the use of guest lectures and thought that Zoom could continue to be used for this function once classes are back in session
- In the online environment, students appreciated when faculty members “over communicated” by email and Latte course announcements what was happening in the next week, upcoming assignments, questions to think about. This was particularly true when these communications happened on days when classes were not in session.
- One student spoke about how a large test that had been a significant part of the final grade was changed into two intensive research projects. The student felt that they worked harder on the projects and learned more than had they studied for an exam.
- Another student expressed concern that guidelines for final exams were discussed verbally but were not posted online, so students could revisit faculty expectations.
- Students requested that grades regularly be posted on Latte by both faculty members and TAs, so students know how they are doing in the class
- Ask students for their input each week about what is working and not working in an online teaching environment and be prepared to make changes

III. Teaching Assistants. Students had a lot of praise and raised a lot of questions about the role of the teaching assistant. Many students said that their TA had taken an even more active role in the class once it moved online. Students appreciated that TAs not only were concerned about the course material but students' well-being.

Other students had concerns about the role and responsibilities of undergraduate TAs versus graduate student TAs. What was the difference between a graduate and an undergraduate TA? They expressed concern that undergraduate TAs were grading. They also expressed concern that graduate student TAs may not be consistent in their grading or may grade more harshly than the faculty member. Suggestions for TAs included:

- Have the faculty member clearly define the roles and responsibilities of undergraduate and/or graduate TAs
- Have graduate student TAs speak about why they are in graduate school and their research in order to be a role model for undergraduates
- Provide accessibility training to TAs
- Have a mechanism to ensure that TAs are holding office hours as promised
- Positive, proactive communication is essential, particularly in an online environment

IV. Technology Needs. Students noted the need for different types of technology based on discipline, as well as that some students had access to better technology than other students creating an unfair learning environment. Suggestions included:

- Different disciplines need different types of technology. For example, computational classes need faculty and students to have tablets. While some faculty and students received this technology, others did not.
- GIS software only works on PCs not a MAC. Even with the patch that is supposed to fix this problem, the program is slow and does not work well.
- Students couldn't access the financial databases at IBS. While there was a mechanism for making individual requests for access, entire classes should be able to access these critical tools for learning.
- Emergency funds should be used to allow students to buy camera attachments for laptops and to support wifi needs

V. Miscellaneous

- Departments that were praised as being helpful included Academic Services, Department of Spiritual Life, Community Living, Brandeis Wellness, Writing Center, Intercultural Center, and the Library
- For out of state students, not having access to BCC services was very difficult
- Brandeis might want to consider some kind of peer network for online learning, both as an academic and a community building exercise

- There needs to be a way to implement extracurricular activities online in order to build and maintain community
- Students missed having course evaluations and want them to be administered again
- As in other forums, concerns were raised regarding tuition if we are in an online format.
- There was also concerns that financial aid may not be increased, and students would have outstanding financial needs. One student commented that there would not be as many on campus jobs and asked if the Hiatt Career center could help students find remote paid internships.
- Many undergraduate students expressed a desire to be on campus even if the majority of their learning was in an online environment. A few undergraduates expressed concern about returning to campus and being a potential vector of infection for their families when they returned home at semester break.
- Graduate students were particularly outspoken about the need to continue with remote instruction with one graduate student saying that it was “insane” and “irresponsible” to have classes in person

Appendix D: Teaching Assistant Focus Groups

The following themes emerged in the two focus groups with TAs.

- I. **A Lack of Clarity about the Role of the TA:** Graduate Teaching Assistants expressed how much easier it was to be a TA in an in-person environment than in an emergency remote learning environment. Faculty expectations about their role changed which caused confusion. Some TAs said that their faculty members no longer were engaged with them, and they were unsure of how to perform their role. Other TAs described faculty members as “abandoning” the class, leaving TAs to take responsibility for all of the instruction. TAs praised faculty members who were able to use technology efficiently and expressed concern about faculty members who were challenged by even the simplest features of Zoom. Suggestions for improvement included:
 - Having a formal list of expectations about the role and the time commitment of the TA
 - Revisit this list at regular intervals throughout the semester
 - Have a mechanism for TAs to report concerns when they believe that there are problems with a class
- II. **Lack of Student Engagement:** TA's expressed how much they enjoyed working with students and being a resource for their peers. They enjoyed being in class with the faculty member and their peers and engaging students in learning. When instruction was in person, it was easier to have a sense of the class and who was engaged or struggling with the material. In an online forum, too many students had their cameras off during class time, tried to figure out things in isolation, and were more willing to use support resources.

When instruction was in person, TA's could position themselves in places on campus with high visibility to encourage students to attend office hours and/or recitation sections. Once we entered Emergency Remote Teaching, the number of students who attended office hours and/or recitation dramatically decreased. One TA spoke about typically seeing half the class in a recitation session in the first half of the semester, followed by having multiple weeks of having no one attend office hours in spite of multiple email reminders. Suggestions for improvement included:

- Require students to turn on their cameras during class time to force engagement (One TA reported that IT had instructed students to turn off their cameras in order for Zoom to have greater stability.)
- One of the most effective uses of the TA was to have the faculty member teach and the TA moderate chat and look for raised hands
- Use the TA to determine which students are attending class and which are missing class. Have the faculty member reach out to students who are missing class to check in with them. Sometimes, students just need to know that their faculty member cares about their being present in class.
- Incentivize student participation in office hours by giving a small number of bonus points on an exam or project for students who engage in these support resources
- Schedule extra office hours before large assignments or exams
- Have office hours at a variety of times to allow for students from different time zones to participate
- Use Slack to build community in a classroom (IBS used Slack as a school and it worked well)

III. Miscellaneous

- ISSO and the Registrar's Office were very helpful