Senate Instruction, Curricula and Advising Committee

Charge 2104: Best Practices for Asynchronous Instruction: Consider and make recommendations on best practices for asynchronous instruction. Report to the Senate Executive Secretary by May 26, 2021.

Definitions

Asynchronous Online Instruction: Teaching materials, activities, and discussions are all online and accessible to students on their own schedules—there are no face-to-face meetings. Students can participate from anywhere at any time. Until fairly recently, almost all online instruction was asynchronous instruction.

Synchronous Online Instruction: Teaching materials, activities, and discussions are all online. However, while students can participate from anywhere, they meet together in real time.

Hybrid/Blended Instruction: Historically, term used to describe a course combining online (asynchronous) instruction with face-to-face meetings. In the 2009 report on *Hybrid Courses and Models of Teaching*, the Senate recommended that in a Rutgers hybrid course at least 1/3 of the class meetings should be face-to-face.[1]

Bichronous Online Instruction: A new term coined by Martin, Polly and Ritzhaupt (2020) and defined as "the blending of both asynchronous and synchronous online learning, where students can participate in anytime, anywhere learning during the asynchronous parts of the course but then participate in real-time activities for the synchronous sessions. The amount of the online learning blend varies by the course and the activities included in the course."[2]

Asynchronous Instruction at Rutgers

Asynchronous instruction has been an integral part of online instruction at Rutgers during the pandemic. In the Fall of 2020, legacy Rutgers units[3] offered some 6,912 asynchronous sections[4] with 107,093 students enrolled; in the Spring of 2021, there were 4,914 asynchronous sections with 95,367 students enrolled.

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[1] Rutgers University Senate. Instruction, Curricula and Advising Committee. Hybrid Courses and Models of Teaching. October 2009. https://senate.rutgers.edu/wp-content/uploads/2019/10/ICAC-Report-S-0806-October-2009.pdf

[2] Florence Martin, Drew Polly and Albert Ritzhaupt. "Bichronous Online Learning: Blending Asynchronous and Synchronous Online Learning." *Educause Review*. September 8, 2020. https://er.educause.edu/articles/2020/9/bichronous-online-learning-blending-asynchronous-and-synchronous-online-learning

[3] Most RBHS units use the Banner system and have a separate registrar/scheduler for each school; comprehensive data is not currently available for those units.

[4] Excludes non-structured classes such as independent studies, research, music lessons, etc.

NB Online and Remote Instruction[5]	Fall 2020	Spring 2021
# Asynchronous Sections	6142	4086
# Enrollments in Asynchronous Sections	87,573	74,774
Camden Online and Remote Instruction	**Fall 2020**	**Spring 2021**
# Asynchronous Sections	439	510
# Enrollments in Asynchronous Sections	10,122	11,232
Newark Online and Remote Instruction	**Fall 2020**	**Spring 2021**
# Asynchronous Sections	331	318
# Enrollments in Asynchronous Sections[6]	9,398	9,361

It is likely that there will be increased demand for traditional, asynchronous instruction in the "new normal" of the post-pandemic world. While most formal[7] and informal student surveys report that students crave, and often do not find, a sense of community and a connection with the instructor in asynchronous courses, they do like the flexibility that asynchronous instruction gives them. For students whose lives have been financially and personally impacted by the pandemic, or who may find themselves geographically distanced from the campus and unable to return, that flexibility may be key to their ability to continue their education at Rutgers.

While we believe that face-to-face, or a hybrid/blending of face-to-face and online instruction will continue to be the primary mode of instruction at Rutgers in the future, surveys of Rutgers students during the pandemic found that when it comes to online instruction students preferred asynchronous or hybrid instruction to synchronous instruction—be it by a narrow margin.

A survey of some 8900 students[8] conducted by the Rutgers Center for Teaching Advancement and Assessment Research (CTAAR) in the Fall of 2020 found that 54.7 percent of surveyed students were either Satisfied (33.7 percent) or Very Satisfied (21.0 percent) with the overall quality of their asynchronous courses. 51.9 percent of surveyed students were Satisfied (36.7 percent) or Very Satisfied (15.2 percent) with the overall quality of their synchronous courses.[9]

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[5] Includes Pharmacy (school 30/31) and New Brunswick Nursing (school 77) as they are RBHS units that use the legacy Rutgers scheduling system.

[6] Estimated.

[7] The Committee is indebted to the Rutgers Center for Teaching and Advancement and Assessment Research (CTAARR0, and especially to Monica Devanas, Chris Drue, Christina Bifulco, Marcie Anszperger, and Joe Delaney, who met with the Committee to discuss issues of asynchronous instruction. CTAAR generously shared the results of various surveys that they conducted during the pandemic, as well as the slides from relevant workshops and presentations that they sponsored.

[8] About one quarter of whom were graduate students.

[9] Rutgers Center for Teaching Advancement and Assessment Research (CTAAR). *Student Attitudes Toward Instruction Survey.* 2020. The number of students who found themselves Dissatisfied or Very Dissatisfied was virtually the same for asynchronous (24.5%) and synchronous (24.9%) online courses. 20.9 percent of students surveyed reported being Neither Satisfied or Dissatisfied with the overall quality of their Asynchronous courses while 23.2 percent of the students were Neither Satisfied or Dissatisfied with the overall quality of their Synchronous online courses.

Camden's October 2020 "Student Pulse" survey of some 360 Arts and Sciences and Business students asked what format they preferred when it comes to remote learning. 45.81 percent preferred Asynchronous; 32.68 percent preferred Hybrid (defined as "combination of posted recorded lectures and live instruction") and 21.51 percent preferred Synchronous online instruction. 69.1 percent of the students surveyed indicated that they had courses that did not have any live meetings, either required or optional.

Interestingly, according to findings from the SERU Consortium's Survey, prior to the move to online learning during the pandemic, 39.3 percent of Rutgers undergraduate students university-wide and 36.9 percent of surveyed graduate students had not taken any online courses.[10] So the move to a fully-online environment was completely alien to most Rutgers students with the exception of those on the Camden campus where only 20.6 percent of undergraduate students had not previously taken online courses.[11] Conversely, 51.1 percent of Newark undergraduates, and 44.0 percent of their graduate students, had not previously taken online courses.[12]

As noted in our earlier report[13]:

> In April 2011, the University Senate recommended that: "Each academic unit (school or college) should develop guidelines for considering proposals for new online courses, as well as proposals to offer previous face-to-face courses in an online mode. Proposals should include an assessment of how learning goals are to be met, and how the instructor is to evaluate student learning. The mode of instruction as an online course must be identified as it is presented to the curriculum committee of the academic unit."[14]

> Requiring a course, even one that was previously approved as a face-to-face course, to be approved by an academic unit as an online course, is a recognition that there are different effective pedagogical approaches in different modes of teaching. This recommendation was implemented and became policy in individual schools/units. But obviously went by the wayside during the emergency!

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[10] Rutgers University. Office of Institutional Research and Academic Planning (OIRAP). *Being a Student at Rutgers During the COVID-19 Pandemic*. 2020. https://oirap.rutgers.edu/surveys/SERUCovid19/Rutgers%20SERU%20COVID-19%20Survey%20Report_Universitywide.pdf

[11] Rutgers University. Office of Institutional Research and Academic Planning (OIRAP). *Being a Student at Rutgers-Camden during the COVID-19 Pandemic*. 2020. https://oirap.rutgers.edu/surveys/SERUCovid19/Rutgers%20SERU%20COVID-19%20Survey%20Report_Camden.pdf

[12] Rutgers University. Office of Institutional Research and Academic Planning (OIRAP). *Being a Student at Rutgers-Newark during the COVID-19 Pandemic*. 2020. https://oirap.rutgers.edu/surveys/SERUCovid19/Rutgers%20SERU%20COVID-19%20Survey%20Report_Newark.pdf

[13] Rutgers University Senate. Instruction, Curricula and Advising Committee. Lessons Learned From University-Wide Online Learning. December 11, 2020. https://senate.rutgers.edu/wp-content/uploads/2020/12/S-2016-ICAC-Lessons-Learned-Online-Learning-As-Amended.pdf

[14] 6 Online Education at Rutgers University. https://senate.rutgers.edu/wp-content/uploads/2019/10/ICAC-ReportS-1015-April-2011.pdf

Once we move past the current emergency, fully online courses, whether they be asynchronous, synchronous, or bichronous, should once again be subject to curricular review.

Making Your Asynchronous Course Better - Things to Keep in Mind

Intentionality

Brown University's *Asynchronous Strategies for Inclusive Teaching*, which is perhaps the most often cited report on asynchronous instruction, reminds instructors that when considering "the kinds of experiences students will have in your courses – participating in a lecture, reading a journal article, viewing a video, etc., select asynchronous activities that deepen their learning from that experience."[15]

As instructors struggled to recreate their courses in the move online, it's clear that at least from the students' point of view that didn't always happen. Student surveys reflect frustration with assignments and activities that didn't seem to serve any academic purpose. It's important for instructors to not only carefully consider why a particular experience would be valuable in a class, but also communicate their reasoning to their students.

The Lecture

In the initial move online in the Spring of 2020, many instructors tried to just continue doing what they had been doing in an online format. They quickly discovered that that didn't work. An 80 minute, or three-hour, recorded lecture, or even one delivered synchronously online, is just overwhelming for students. Lectures should be presented in segments of about 10 minutes with perhaps activities to reinforce that segment in between. It's easier to retain knowledge presented in smaller bites and students are more likely to watch a series of mini-lectures than they are to watch one very long lecture. Embedding questions and interactions into recorded lectures using tools such as PlayPosit (https://canvas.rutgers.edu/external-apps/playposit/) helps engage students as well.

Communication and Flexibility

When asked "What did your instructor/course do that aided your learning?" the most frequent responses in the CTAAR student survey fell into the categories of:

> 1) Instructor-Student Communication;
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> 2) Instructor Availability;
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> 3) Flexibility.

We've long known that student instructor connection and interaction is a key component both for student learning and student retention whatever the modality of instruction. It becomes even more critical in an asynchronous environment where creating that connection has to be a much more deliberate process than in a face-to-face, or even synchronous, online, environment. And

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[15] Brown University. Harriet W. Sheridan Center for Teaching and Learning. *Asynchronous Strategies for Inclusive Teaching.* https://www.brown.edu/sheridan/asynchronous-strategies-inclusive-teaching

while responding to student emails in a timely manner may be a critical component of communication and perceived availability, effective communication goes well beyond email and includes things such as:

- Communicating expectations (what the course entails; approximately how much time per week you anticipate students will need to devote to course activities; what kinds of assessments you plan to conduct; etc.). Instructors may consider creating an orientation video for their classes. Some instructors have also had success with creating a syllabus quiz.
- Consistency in communication. If you are sending out recorded lecture/assignments on a weekly basis, send them out on a consistent schedule. If students know that a lecture is going to appear on Saturday or Monday, they know when to look for it. If their responses in discussion forums are expected to be completed within a certain time frame, they need to know what that time frame is.
- Providing feedback in a timely manner. Students need to know if they are on track and what issues they may need to address. Embed questions and interactions into your recorded lectures using tools such as PlayPosit (https://canvas.rutgers.edu/external-apps/playposit/). Not only will this better engage your asynchronous students, but students will also get a sense as to how well they are absorbing the material.
- Soliciting feedback from your students. Use the Mid-Semester Course Assessment to gauge how the course is going overall, but also use Zoom polls and options such as Poll Everywhere Surveys (https://www.polleverywhere.com/) on a regular basis.
- Maintaining a regular schedule of office hours. It makes a big difference to students if they know that access to the instructor can be had without the need to make a special appointment. When setting up an office hour schedule, bear in mind where the students in that particular course are located. If you have a couple of students in Japan keep in mind that 2 pm on the East coast is 3 am for those students!

While consistency is important, students also place a high premium on instructor flexibility. Sometimes, and especially during the current crisis, life gets in the way. Students want to know what the expectations are, and when things are due, but they also want to know that the instructor understands and cares enough about them to modify those expectations and deadlines when warranted.

Creating a Sense of Community

Students want to engage with their instructors, but they also greatly miss interacting with other students. The SERU Consortium Survey found that one of the biggest obstacles to successful transition to online learning during the COVID-19 pandemic identified by Rutgers students was the lack of interaction/communication with other students. 55 percent of undergraduate students and 46.9 percent of graduate students surveyed considered this to be a major issue.[16]

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[16] Rutgers University. Office of Institutional Research and Academic Planning (OIRAP). *Being a Student at Rutgers During the COVID-19 Pandemic.* 2020.

Instructors have devised a variety of means to create a sense of community in their asynchronous classes. In many cases, they have essentially moved to a bichronous model where the "asynchronous class" meets synchronously online either once a week or on some other regular schedule. When done well, this becomes a flipped online classroom model, where students may watch lectures or do readings on their own time and then meet together to engage in discussions or other active learning activities. Tools such as VoiceThread (https://canvas.rutgers.edu/external-apps/voicethread/) also allow for video and audio comments/discussions between students. Group projects where students can work in small groups also promote engagement and community.

Some instructors offer optional synchronous sessions that students can attend to ask questions or discuss course content. Some schedule even more informal sessions, "coffee chats," for example, where students and the instructor can engage in a more social setting.

Whether they be required or optional, having some synchronous elements in an asynchronous course is probably critical in helping to create a sense of community in a course. And that community helps with student engagement and motivation in a class.

Creating a sense of community in an asynchronous course requires work. And it's not really something that can be achieved with a class of several hundred. Generally, 30 is considered the maximum viable enrollment for an online class. Obviously those kinds of limits were not viable during the pandemic. However going forward departments should consider capping asynchronous courses at 30 or less.

Meeting the Needs of Students with Disabilities

Even pre-Covid, there was research that indicated that many students with disabilities may actually benefit from online learning and perform better in online courses than in traditional face-to-face courses.[17] And as a recent *Chronicle for Higher Education* points out, the move to online learning due to Covid has meant that "requests long labeled impossible, such as remote learning and recorded lectures, were universally adopted overnight."[18] The need to tailor online instruction to best serve all students resulted in improved instruction for many disabled students. Surveys of students and faculty conducted by the Camden Office of Disability Services largely

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https://oirap.rutgers.edu/surveys/SERUCovid19/Rutgers%20SERU%20COVID-19%20Survey%20Report_Universitywide.pdf

[17] See for example, Stewart,James F.,II, Coretta Mallery, and Jaehwa Choi. "A Multilevel Analysis of Distance Learning Achievement: Are College Students with Disabilities Making the Grade?" *Journal of Rehabilitation* 76, no. 2 (Apr, 2010): 27-39. https://login.proxy.libraries.rutgers.edu/login?url= ?url=https://www-proquest-com.proxy.libraries.rutgers.edu/scholarly-journals/multilevel-analysis-distance-learning-achievement/docview/230645073/se-2?accountid=13626.

[18] Puang, Serena. "As Colleges Strive for a Return to Normal, Student With Disabilities Say, 'No Thanks.'" *Chronicle of Higher Education*, May 11, 2021, https://www.chronicle.com/article/as-colleges-strive-for-a-return-to-normal-students-with-disabilities-say-no-thanks?utm_source=Iterable&utm_medium=email&utm_campaign=campaign_2326710_nl_Academe-Today_date_20210512&cid=at&source=&sourceId=&cid2=gen_login_refresh

support this conclusion.[19] Many students point to flexible deadlines, availability of close-captioned recorded lectures; virtual meetings; reduced stress in test-taking and class attendance; and what may be termed an increased understanding and empathy on the part of faculty. The perceived advantages were not universal—a number of students expressed a desire to go back to in-person learning. But as we move towards "normal" instruction, it's important that the needs of students with disabilities receive special attention and that gains made as a result of crisis aren't lost again.

Faculty should also be made aware of Ally, a new accessibility tool that will be made available in Canvas in the fall of 2021. Ally works within Canvas to help instructors understand and adjust course accessibility issues. For students, Ally can create alternative formats of the original files the instructor uploads. For example, if the original file is a PDF, Ally can create an audio, electronic braille, ePub, and other formats of the same content. This is especially useful for students who use a variety of assistive technology and need to receive the information in different ways.[20]

First Year Students

As pointed out in a previous report:

"There are also major pedagogical issues with first year students coming into a fully online environment. As we have pointed out in earlier reports, some studies have shown that students who took online courses early in their academic career were less likely to complete those courses than students in fact-to-face or hybrid courses; and also that those students were "slightly but significantly" more likely to drop out of school in subsequent terms. Online courses require students to be proactive, well-organized and highly self-disciplined; many first-year students are just not ready to do well in this format."[21]

Once other options become available, first-year students should be discouraged from registering for asynchronous courses.

Faculty Concerns

There is little doubt but that the move to online instruction resulted in significantly more work for instructors. Pre-Covid, developing an online course, or transitioning a face-to-face course to online, could easily be a year-long process. In the Spring of 2020, Covid reduced the process to a

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[19] Camden Office of Disability Services. *Camden Disability Student Survey F2020*. Camden Office of Disability Services. *Faculty/Staff Survey F2020*; Camden Office of Disability Services. *Student Survey – LAW – F2020*.

[20] Rutgers Newark has been using Ally within Blackboard for the last year and a half and has had good experiences with the program. When Ally is turned on in a course, the instructor will see dials next to their course content; red dials appear for files that have 0-33% accessibility score, yellow for 34-66%, and green for 67-100%. The scores can help instructors explore other ways to make their content more accessible. Ally will also offer guidelines on how to address these issues and offer suggestions for improvement. The Office of Teaching and Learning with Technology (TLT) will be offering future trainings on this product.

[21] Rutgers University Senate. Instruction, Curricula and Advising Committee. Lessons Learned From University-Wide Online Learning. December 11, 2020. https://senate.rutgers.edu/wp-content/uploads/2020/12/S-2016-ICAC-Lessons-Learned-Online-Learning-As-Amended.pdf

week at most; instructors then got the "luxury" of having the summer to move their Fall courses online. But even moving beyond the need for most faculty to learn the basic technologies, preparing and teaching an asynchronous course--where things must be done in advance--requires significantly more preparation time. Effectively teaching an asynchronous course requires a significantly greater time commitment as well. In a survey of almost 2000 Rutgers faculty conducted by CTAAR[22], issues of Instructor Workload were one of the major recurring themes in instructor comments. Instructors reported that they "felt burned out, upset, angry." This is especially problematic in the case of PTLs, whose "by the course" contracts were not designed to account for the significantly increased workload; and for TAs, whose work hours are meant to be limited. Faculty in professional schools, many of whose graduate students are working full-time and require support in evenings and weekends, report being frustrated not only by the blurring of their professional time and personal time, but by the erosion of their research time.

Some departments have attempted to at least mitigate some of the stress on their faculty. The New Brunswick Math Department, for example, limits asynchronous courses to 30 students. In Camden, instructors teaching in the Biology department were given "section leaders/graders" in asynchronous courses larger than 50 students.

A sudden, totally unanticipated, move from face-to-face to online instruction required a major commitment on part of the faculty. From what we have seen, most stepped up and embraced the challenge. But as to be expected in an institution of this size, there are some who just never found a comfort level in this format, while a few seem to be just biding time until things return to "normal." However, departments have a responsibility to ensure that courses under their purview meet certain standards. Therefore, as long as a significant amount of courses continue to be offered asynchronously—especially courses that never went through an approval process as an asynchronous course—departments should be encouraged to do peer-review of those courses. Chris Drue at CTAAR has developed a useful document on Peer Review of Online Instruction that includes a list of observable online teaching behaviors.[23] Peer observation is actually less intrusive in an online environment and the intent here is to assist faculty who may be struggling in this format and to perhaps learn from those who have figured out how to do it well. In this particular circumstance observation it is not meant to be limited to courses offered by untenured faculty, nor are the observations meant to be used in personnel actions.

Academic Integrity

Academic Integrity continues to be an area of major concern for instructors. As stated in our earlier report:

"Sadly, the move to a completely remote environment in the Spring of 2020 seems to confirm that faculty suspicions were indeed correct. The School of Engineering, for example, saw a huge jump in academic integrity violation cases at the end of that semester. Camden SAS reported an

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[22] Rutgers Center for Teaching Advancement and Assessment Research (CTAAR). *Remote/Online Instruction in Fall 2020: What We Learned*. January 12, 2021.

[23] https://ctaar.rutgers.edu/wiki/pages/c0F482_/Peer_Review_of_Online_Instruction.html

almost 600 percent increase in academic integrity violation cases for the Spring. The School of Nursing-Camden had a huge increase in blatant academic integrity violations while students were using ProctorTrack. This not only impacts the administrative units that have to deal with these cases but results in students essentially going into limbo as they wait for their cases to be adjudicated. Faculty are responding to the academic integrity issues in a variety of ways. Some have moved to open book online tests which are geared toward students being able to apply what they have learned. Some with smaller classes are monitoring exams via Zoom. Some moved away from written to oral exams, meeting with individual students over the course of several days. While this seemed to work well with small classes, it's not really an option for larger classes. Some have moved from "testing" to developing other kinds of assessments."[24]

Rutgers IT has developed a site with information on alternatives to traditional, proctored exams.[25] Suggestions include things such as more frequent quizzes to replace exams; student-developed quiz questions; open book assessments; presentations; annotated bibliographies; and group projects. Some instructors have also developed VoiceThread presentations with video-based questions that students can answer. The University of Minnesota Center for Educational Innovation also has a nice site on alternative assessments[26], including small group Collaborative Testing using multiple choice questions.

The Rutgers University Senate recommends that:

1. Schools should widely share the "Best Practices" identified in this report—especially those found in the "Making Your Asynchronous Course Better" section and the options offered in the "Academic Integrity" section—with their faculty and encourage discussion of these practices in their departments.
2. Whether they be required or optional, most asynchronous courses should have some synchronous elements.
3. Once we move past the current emergency, faculty developing new online courses should once again be adequately supported whether it be through course relief or financial incentives.
4. In recognition of the fact that there are different effective pedagogical approaches in different modes of teaching, once we move past the current emergency fully online courses, whether they be asynchronous, synchronous, or bichronous, should once again become subject to curricular review and approval.
5. As long as a significant number of courses continue to be offered asynchronously—especially courses that never went through an approval process as an asynchronous course--departments should be encouraged to initiate peer-review of those courses. This

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[24] Rutgers University Senate. Instruction, Curricula and Advising Committee. Lessons Learned From University-Wide Online Learning. December 11, 2020. https://senate.rutgers.edu/wp-content/uploads/2020/12/S-2016-ICAC-Lessons-Learned-Online-Learning-As-Amended.pdf
[25] https://it.rutgers.edu/remote-instruction/knowledgebase/alternatives-to-proctored-exams/
[26] https://cei.umn.edu/support-services/tutorials/integrated-aligned-course-design-course-design-resources/alternative

peer observation should not be limited to courses offered by untenured faculty or PTLs, nor are the observations to be used in personnel actions.

6. Once we move past the current emergency, departments should consider capping asynchronous courses at 30 or less.
7. Where it is deemed impossible to cap a course at 30, instructors for those courses should routinely be assigned graders or TAs.
8. As we move past the current emergency, the University should look at the positive aspects that many students with disabilities found in the move to online instruction and ensure that gains made as a result of the crisis aren't lost again.
9. Once other options become available, first-year students should be discouraged from registering for asynchronous courses.