Teaching Design Curriculum Online

PRESENTED BY:
Jeffrey Cepull (VP for Information Resources, IS&T, Jefferson)
Robert Fryer (Associate Professor, MS Sustainable Design, Jefferson)
Rob Fleming (Director, MS Sustainable Design, Jefferson)
Jefferson (Philadelphia University + Thomas Jefferson University)

- Combined institution (Philadelphia University + Thomas Jefferson University) as of July 1, 2017
- 10+ colleges, 100+ academic programs, 7,100 students
- TJU – graduate health care focus in pharmacy, nursing, and medical school
- PhilaU – undergraduate focus in architecture, design, engineering, textiles, and business
- Part of a major regional medical center, Jefferson Health
- Two primary campus location, Center City Philadelphia and the East Falls Campus (approximately 110 acres)
Why Teach Design Online?

----Participant Exercise----
Institutional History
Barriers and Resistance
Green spaces in England are estimated to be worth £2.2bn to public health.
Reach more students than otherwise possible

Online Student

- +95% work full time
- Jobs require +40 hrs/wk
- 25% have families with small children
- Some are single parents

"Distance learning allows them [students] to live where they want and keep their jobs while having access to high quality faculty instruction."

(Griffen, 2015, pg 2)
Semester Schedule

WHAT

1. Information download
2. Design in breakout rooms
3. Convene as a whole class
4. Vetting/feedback
5. Conclusions/Next steps

*Charrettes – entire classes designing live and simultaneously in breakout rooms with a facilitator
WHAT
Weekly
Schedule

Live team meetings with faculty for progress review and feedback
Lessons Learned

• Based on course development, teaching, consultation with practitioners, research and Online Nexus Learning Grant
Lessons Learned

- An online studio cannot be the same as an on-campus studio
  - Type of student is different
  - Time impacts the students differently
  - Efficiency via course management becomes more of a priority
    - Expectations are different for meetings online rather than in person
    - Assignments (in class and outside of class)
    - Schedule
    - Rubrics
    - Coordination with outside experts

<table>
<thead>
<tr>
<th>Traditional Student</th>
<th>Online Student</th>
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<tbody>
<tr>
<td>- Most are not working full time</td>
<td>- + 95% work full time</td>
</tr>
<tr>
<td>- More time for work outside of class</td>
<td>- Jobs require +40 hrs/wk</td>
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<td></td>
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</tbody>
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"Distance learning allows them [students] to live where they want and keep their jobs while having access to high quality faculty instruction."

(Griffen, 2015, pg 2)
Lessons Learned

• Importance of time
  • Online students have less time available than on-campus students
  • Adding additional content/assignments does not improve outcomes
  • Current (tentative) hypothesis: it takes more time/credits to achieve same outcomes as a F2F studio

“It’s easy to overwhelm students”
“Strive to balance what the students need to learn from your course with the time they have to learn. In online courses, less may indeed be more.” (Creasman 2012)
Lessons Learned

- Address tech skills before asking students to use it
  - I use up to 8 different software

  “Currently studios can use up to four or more different software programs to manage assignments, communicate between instructor and students, socially interface between students and conduct reviews.”
  (Griffen, 2015, pg 4)

Teach the technology students would use and created low-stake assignments for them

(Creasman 2012; Van Tyron & Bishop 2009; Rabe-Hemp, et al 2009)
Lessons Learned

• Collaboration is hard – even harder online
F2F Collaboration

- Synchronous and instantaneous feedback
- Face to Face / same physical space / body language / familiarity
- Simple, intuitive tools

Online Collaboration

- Mostly Asynchronous with periods of intense synchronous activity
- Feedback takes longer
- At a distance
- Relatively complex technology
• Collaboration is hard – even harder online
  • Coordination of real world projects is difficult because of technology, but manageable
  • Team dynamics training essential

Lessons Learned

1. Forming
   - Introductions
   - Goals & Purpose
   - Ground rules
   - Meeting schedules
   - Best behavior
   - Disagreements
   - Conflicting behaviors (missing ground rules)
   - Conflicting schedules
   - Stated goals are different from actual goals
   - Conflict is not always noisy (may be withdrawal or formation of subgroups)

2. Storming
   - Establishing the real guidelines
   - Re-evaluation of decisions made in Forming Stage
   - Brand new rules
   - Genuine buy-in
   - True collaboration

3. Norming
   - Trust
   - Know others will do their part & come through

4. Performing

Stages of Team Development (Tuckman, 1965)

Collaboration: where you no longer defend your position, but discover and then support the reasons behind the position. You are now open to other solutions that will reach yours and others’ goals.

Collaboration
- You lose / I win
- You win / I win
- Neither
- Win / I lose

Compromise
- Uncooperative
- Compromising
- Unassertive

Competing
- Uncooperative
- Competing
- Assertive

Avoiding
- Uncooperative
- Avoiding
- Unassertive

Accommodating
- Uncooperative
- Accommodating
- Unassertive

Ask "Why?" (up to 5x) to discover the reasons behind your position.
Methods

• Multiple charrettes
  • In-class collaboration
  • Model design, critical thinking, critical skills and analysis
  • All are live, online, synchronous using virtual breakout rooms
Methods

1. Charrette Example:
   Start: 14:55

2. Review Example - Mark ups
   Start: 1:39:27

3. Vetting process

Lessons Learned

• Live and recorded lectures
  • Flipped classroom approach
    • Most lectures are recorded and assigned as “homework” – make sure students actually watch it
  • Always record classes and especially lectures
    • Students like being able to go back and review faculty feedback
    • MSSD student feedback: a pdf of a presentation is often preferred to a recorded live lecture - again, time is an issue
Critical Thinking

• Use “flipped classroom” approach
  • Spend more time analyzing/making meaning together rather than acquiring more content together
  • Model critical thinking for the students
  • Faster & more frequent feedback
  • Specifically at critical moments
    • During site analysis rather than site inventory
    • During initial design decisions
    • After initial results from simulations
Tools

**Software in my studio**
- Bb
- Adobe Connect/zoom
- Power point
- Prezi
- Google Drive
- Google Sheets
- Google Slides
- Camtasia (infrequently)

**Hardware in my studio**
- Laptop
- Multiple screens
- Mobile phone
- Headphones
- Tablet
Tools

Shown here: Prezi, Power Point, Adobe Connect
How Outcomes Changed

• Cross scalar development
• More integral development
  • Spaces functioning for multiple purposes
• Generally more refined
• More detail
• Learning outcomes achieved
• Fewer overwhelmed students
COMMUNITY GARDEN:
Community garden is an area dedicated for the community within the campus property.
The garden has a separate entrance and parking and separated from the school for security reasons. 
This zone consists of the following:
- Food trucks
- Wooden stalls serviced by the food trucks
- Community stage for night singing festivals, Cultural seminars, karaoke parties, etc.
- Access to the school amphitheater can be provided after the school management approval according to the events.

HABITAT & OPEN PLAYING AREAS

This particular part on the campus is the area that enhances the relationship between students and natural habitat. 
Students at this area have a direct contact with nature through the following:
- Bird migration tower
- Duck lake.
Next Steps…

My next steps to innovate online studios

1. More time spent analyzing with students live in class
2. More frequent design cycles between scales (neighborhood-site-building-individual)
3. Continue to investigate how to improve outcomes while not overwhelming students (doing more with less)

Conway’s Game of Life

By Rodrigo Silveira Camargo (RodrigoCamargo on commons or RodrigoCamargo on en.wikipedia - Own work (Original caption: “This animation was made by myself.”)), Public Domain, https://commons.wikimedia.org/w/index.php?curid=12854659
Summary: Lessons Learned

• Based on teaching, consultation with practitioners and Online Nexus Learning Grant

• Online studio cannot be the same as an on-campus studio
  • Type of student is different
  • Time, time, time
  • Efficiency becomes more of a priority

• Importance of time
  • Online students are a different demographic than on-campus students
    • The online studio will not succeed if it’s the same as the on-campus studio
    • Current (tentative) hypothesis: it takes more time/credits to achieve same outcomes as a F2F studio

• Address tech skills before asking students to use any

• Collaboration is hard – even harder online
  • Team dynamics training essential
When you return to your institution, what will you take with you from this session?

----Participant Exercise----
References


Denise, L (1999). "Collaboration vs. C-Three (Cooperation, Coordination and Communication)". INNOVATING. Rensselaer Institute. NY


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Pressman, A. (2009). "It’s a very good time to develop your firm’s collaboration skills". Architectural Record

Images – Why Slide (clockwise)
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