

# DIGITAL FLAGSHIP TEACHING PRACTICES

## Curricular Integration of iPad Technology

### GETTING STARTED

Course design choices occur both intentionally and consequently, growing from experience in the classroom, student feedback, pedagogical evidence, and the resources at hand. As the available tools increase and more modalities of delivery normalize, the preliminary work of assessing options and making these choices evolves as well. As instructors question the potential value of technology within their curricular structures, we recommend first working with the key components of the course that have not and will not change. Learning objectives remain a primary focus. Pedagogical approach will continue to be based on experience, knowledge, and individuals. Students will continue to seek information and opportunity through their classes and interactions. Devices such as the iPad Pro are no more the center of the classroom than the chalkboard or projection screen have been: they are tools to be used when they enhance the experience for teachers and students.

Viewing technology as a tool the instructor may choose to use at their discretion, course curriculum does not need to be “redesigned” to center around the implement. Rather, as the course design is acclimated to each semester’s schedule, logistics, and emerging needs, the integration of technology can be incorporated as it presents opportunities for improved learning experiences and skill development. Instructors are likely to find that they cultivate their own best practices for their curriculum and subject area as they continue to teach and refine their courses. It is key to keep in mind that there is no end date at which instructors must reach some measure of integration or utility, and there are no prescriptive approaches that work across disciplines and teachers. Ultimately, the only measure of success is whether our graduates leave Ohio State with the skills and experience needed to thrive in the world beyond our campuses.

### Revisiting Basic Course Design

Since the announcement of Digital Flagship we have received many questions like; how would a device enhance my curriculum? In place of questions focused on the device, we recommend the following:

- ▶ Think back to the learning objectives that were originally defined for the course. What do you want the students to do, show you, exemplify or model?

- ▶ Consider the ways in which students can model these objectives- the modalities and formats that support the end goal. There may be several, and it is always an option to give the students choices over which they use.
- ▶ Prioritize the options that employ active rather than passive learning and assessment. Are the students doing, designing, creating, processing, or representing? Or are they demonstrating memory by reproducing the information they learned passively?

## Design Example

An example common across general education courses in the humanities is the ability to read a text critically and analyze it for logical fallacy, support, and other mechanics of rhetoric.

1. **Objective:** Students will be able to analyze written sources and identify key pillars to the argument or discovery being claimed; they will question the logical structures and credibility of sources by noting them in the text and assessing their strength or weakness; they will synthesize the text and make final observations.
2. **Possibilities:**
  - a. Students can be required to participate in a course discussion.
  - b. Students can be asked to respond on a discussion board.
  - c. Students can be assigned a writing task where they analyze the text.
  - d. Students can be asked to take dialogic notes on the text (ask questions, comment on how sections resonate with or impact you, demarcate rhetorical structure, point out gaps or areas where key needs aren't met, etc.).
  - e. Students may be to take dialogic notes on the text and then create a short video where they narrate their experience reading the text and subsequent analysis.
3. **Instructional choices:**
  - a. The last option (e) requires the most work from the student and may constitute a larger part of the grade in the course. This is feasible per the instructor's discretion.
  - b. Option (d) will be less formal than (c) or (e), but offers a quick, effective way for the student to display their abilities and for the instructor to assess. The expressive nature of this adds depth to the insight into the students' processes and skills.
  - c. Options (a) and (b) would likely be best supported by first requiring (d), ensuring the students do not just passively read the text and come to class prepared to summarize, but

rather the students engage with the text and produce their own responses before class, easily shareable, printable and displayed across multiple platforms.

- d. Option (c) may be familiar to students and instructors, and if a longer assignment is desired, it is perhaps a good idea to offer students the choice between (c) and (e).

## INTEGRATION DESIGN & SUPPORT

Next, the instructor must determine what type of skills the student needs to complete the assignment. If the student needs to develop a new skill to complete the task, as is often the case in higher education, the instructor may choose to provide an external tutorial on the skill such as a video or step-by-step-guide. Alternatively, the instructor can demonstrate the skill in class.

Course integration breaks down into two facets: learning and assessment. Both are valuable means of using technology that are ultimately at the discretion of the instructor.

### LEARNING INTEGRATIONS

Includes any situation in which the students are receiving, processing, organizing, sharing, or redistributing information. This can be an individual or group activity and may occur in any classroom setting. Typically, these are identified as methods of notetaking, outlining, defining, and studying. While the learning itself may be perceived as passive, it can become active when the student has a task to execute to facilitate the learning.

#### Example:

One of the simplest examples of learning integration that may occur without any instructor direction: consider a student in a large lecture hall for an Introduction to Psychology course. The lecture includes a slide with an image of the areas of the brain.

1. On a laptop, the student has two choices for how to represent that image in their notes: they can find the same image online, perhaps in Carmen, and paste it into their typed notes, or they can transcribe the concepts inherent to the image into typed text.
2. With a paper notebook for notes, the student can either transcribe the concept into text or draw the image themselves, which then involves their own processing and reproduction.
3. On an iPad Pro, the student can do any of the above options (pull in digital image, draw the image, type text or write text by hand), but they can also resize their drawing, make changes,



undo errors, zoom in to write smaller notes in some sections, add a web link to their handwritten notes, insert audio elements, etc. Further, while many students vastly prefer handwritten notes, they are difficult to duplicate or share and easily lost. The expressive nature of handwritten notes has a valuable cognitive component, and when created on an iPad Pro, they can be easily organized, changed, shared, exported, printed, uploaded to Carmen, sent to the instructor, or integrated into a video, document, PowerPoint, or really any other digital media.

## ASSESSMENT INTEGRATIONS

Includes any decision to assign a task, project, activity, or process in order to measure students' development of skill, knowledge base, or comprehension. These assignments typically overlap with project-based learning and assessment models, and they work to provide the instructor with the ability to view the learner's progress with the subject material from a dynamic that may be more insightful than a model that allows only for right and wrong.

### Example:

Consider the following example from a biology class: one of the many concepts covered is cell division, or mitosis and meiosis. The student takes a quiz that has the following question:

*In cell division, \_\_\_\_\_ are special proteins that signal to a cell that it's time to prepare for division.*

The answers include four different choices, with the right one being "cyclins."

1. On a traditional multiple-choice quiz, a student can only get this question right or wrong, and if this is the one question representing this concept on the quiz, the student can only be assessed as knowing or not knowing this process.
2. However, if the student were asked to draw a diagram of the cell division steps, the instructor would likely see that there were aspects that the student understood correctly, others they did not understand at all, and perhaps some parts that were partially misunderstood but not wholly.
3. To be feasible for replacing a quiz, though, the student would need to demonstrate a larger understanding of the content covered in the unit. Thus, it might be more effective to ask them to create a web poster on Adobe Spark Page or a video via Explain Everything to teach the concepts of the unit to a younger student, or something similar.

## DOCUMENTING ABILITIES BEYOND COLLEGE

Teaching general education courses often comes with a distinct need to attach the concepts to "real world" applicability, to demonstrate how the student will utilize this knowledge in the future after their formal education is complete. One of the major benefits to active learning with digital tools is skill development and preparedness for workforce entry after college.

For instance:

- ▶ Students in any professional field are likely to at some point be tasked with updating, maintaining, or creating some type of digital content. Being literate in the formats and processes better prepares them to lead and make informed decisions.
- ▶ Should a student manage projects in future careers, digital literacy is key to being knowledgeable in working with vendors and assessing fair proposals and work models.
- ▶ Overwhelmingly, job interviews are utilizing technology to assess candidates. They may require a recorded demo, a portfolio, a task utilizing software, or another performative measure, as is common at Ohio State. A student who experiences these projects in their undergraduate education has the foundation to start their career after graduation.

Students considering their own trajectory in post-graduation career seeking and building are very engaged with that preparation. They value learning more about contemporary hiring practices and screening practices that ask for them to demonstrate a skill, complete a task, or provide a portfolio. We want to ensure that their four years of training and education at Ohio State fully equip them for future endeavors in applying to positions or graduate school, complete with easily distributed examples of their work and abilities. These tools and examples are intended to provide instructors another mode to present students with these opportunities; aligning goals of comprehension, critical thinking and career preparedness.



### **OSU Libraries' *Choosing and Using Sources: A Guide for Academic Research:***

Show students how to find this free, thorough resource from OSU Libraries and use it to support their own ability to research effectively and use sources correctly. Direct link to chapters of content as they pertain to class assignments. **LEARN MORE.**

# CURRICULAR INTEGRATION EXAMPLES

## Learning Integrations

- **Active Reading Methods:** Show how to open a reading assignment in *Notability* app, outline the cognitive structure of active reading, and model taking notes directly into the reading. Write notes in the margins with questions to the author or of the concepts themselves. Determine source credibility and indicate it. Identify logical fallacy. Students who ask questions and interact with the text in this way will come to class with notes that prepare them be engaged in discussion. These notes are easily shared, printed, posted to Carmen, projected for the class, submitted for assignments, and used in other media.
- **Effective Notetaking and Organization:** Using the full capacity of the *Notability* app to take notes in a class meetings and lectures. Explore modes and benefits: image capture, image copying and insertion into notes, image creation to illustrate concepts, typed versus written notes using the Apple Pencil, media incorporation of video, web links, or recorded audio from the session. Show the methods of sharing, exporting, and importing for collaboration, submission to Carmen, archiving, and printing.
- **Accessibility and the Learning Brain:** Students explore metacognition and the variability of learning needs in alignment with theories of universal design. They walk through the extensive set of options in the iOS system's accessibility settings, making customized choices and noting why they did so in each instance. Alternatively, students exchange devices and customize someone else's accessibility settings. Devices are returned and users document what they found better or harder due to someone else's preferences. Students ultimately report out on their self-discoveries in whatever mode the instructor chooses.
- **Proofreading Your Work:** Students use iOS text-to-speech function to do an auditory proofreading of their writing. Listen to your prose to detect issues otherwise missed in visual reading.

## Assessment Integrations

- **Video Documentation of Process, Argument, or Narrative:** Students will conduct all necessary research, drafting, scripting, and revisions in preparation. Once all planning work is complete, students review learn to use the *Explain Everything* app through either video tutorials or in-class demonstrations. They proceed to produce their video with optional drop-in support on campus. Final products may be submitted privately to the instructor, posted publicly on the web, or posted to the class only in Carmen. This can support online symposiums and presentations or moving from argumentative essay writing into creating a public product with one's work. This is an example of project-based learning that can be scaled larger or smaller, taking as little as one week of class and as much as the full term if the students are creating more complex videos and their own graphics to use in them, interviews, etc.
- **Prose to Podcast: Students use popular audio recording formats to document complex discussions, arguments, research, or narratives.** Students learn basics of capturing audible, clear sound, editing and sound design, podcasting and an overview of how to create one with an iPad. Students may choose to keep final product private or publish for wider listening; programs may select submissions to include on departmental podcast series.
- **Digital Media and Marketing Approaches:** Students are asked to leverage specific applications to create branding and marketing support for a product. The product may be uniform across the class or up to the student. Students utilize Adobe apps, Explain Everything, or other applications as the instructor determines. They then utilize social media and web analytics to execute their strategy, reporting back on successes and lessons learned.
- **Visual Communication of Concepts and Research:** Consider scenarios where students need to illustrate a process, system, research finding, or diagram for an assignment, presentation, or group work. In the past, many of these executions have required access to expensive desktop software that comes with a steep learning curve. Now, students have access to countless apps to help them create professional-quality designs that will demonstrate their learning. The entire Adobe suite of apps are free and easy to use on an iPad Pro.

