During the 2012–13 academic year, participating Duke faculty investigated how the use of iPads impacts students’ educational experience in the following ways:

1. **By integrating iPad apps designed specifically for use inside the classroom into their curricula.** We noticed that, in many of our investigations over the past few semesters, the role of the iPad in class seemed to be settling into that of an “easy-to-carry internet portal.” We decided to try to shift the focus of investigation this year to the use of the devices in a more interactive, collaborative way.

2. **By using iBooks Author, or a similar program, to build an e-textbook to use with future classes, or to use e-textbooks to replace traditional course materials.** We also wanted to continue our investigation into the production and consumption of e-textbooks or other e-materials. We also hoped to have some instructors specifically look at using iBooks Author.

### Proposed Uses

Courses that were supported by CIT typically used iPads in multiple ways rather than a single use. Areas that faculty and students explored with iPads are listed below:

#### Contemporary Turkish Composition - Erdag Goknar
Students used iPad apps and multimedia capabilities to record, observe, and work with dialogue and visual expression to help think of language in cultural contexts as dramatic performance.

#### Clinical Anesthesia Practicum (School of Nursing) - Sharon Hawks
Nurse Anesthesia students used e-textbooks delivered via the Kno iPad app. They also explored using iPad apps and information access in the clinical setting. This project began during the 2011-2012 academic year, but has been extended at regular intervals in an effort to help us determine how student attitudes toward the devices develop and change over a period of time that extends beyond a single semester.

#### Issues in Arabic Language/Society - Maha Houssami
Students in this class used their iPads in conjunction with several engaging apps, which included Baiboard, used for collaboration and annotation; Readability, a news aggregator; and Socrative, an app that allows the instructor to create and deliver assessments during class.

#### Marine Megafauna - David Johnston
Dr. Johnston’s custom-designed iPad app, Cachalot, was used by students to access all course materials. They also used several mapping applications like ArcGIS and Google Earth.

#### Psychology of Consumers - Jorgianne Robinson
Students in this class were encouraged to use iPads to take notes and work in groups using collabora-
Intensive Elementary French - Sandra Valnes Quammen  
Valnes Quammen created an iBook “pamphlet” using Apple iBooks Author. Students in the class used the devices to access the iBook, which contained a variety of interactive exercises for students to use in practice.

Restoration Ecology - Rebecca Vidra  
Students used iPads to facilitate field research. Vidra also hoped to investigate the use of a variety of electronic course materials, and wanted to experiment with the use of the devices in facilitating group work as part of a modified TBL (Team-Based Learning) classroom approach.

Major Findings

1. Using iPads to Engage Students in Class  
Instructors reported that they were relatively successful engaging students in class with the iPads, particularly when they specifically used apps that were designed for this purpose. Some types of apps that instructors reported as helpful in achieving this goal include assessment apps (e.g., Socrative), collaboration-focused apps (e.g., Baiboard), and media aggregation apps (e.g., Readability, various news organization-developed apps). We’ve also discovered that subject-related apps that aren’t necessarily built for classroom use can be very effective in engaging students. For example, Languages faculty have learned that fun and interesting apps developed in the language that they are teaching can be very effective at engaging students, can assist them in learning the language, and can simultaneously introduce students to cultural, political, and economic realities encountered by native speakers of that language.

Generally speaking, students found the inclusion of these “in-class engagement” apps to be helpful and enjoyable when they were tied to novel, exclusive class activities. However, we note once again this year that students continue to express frustration when iPads and associated apps are introduced as an alternate way to accomplish typical, well-practiced classroom tasks such as note-taking. Students frequently complain that the device’s size and touch-based interface don’t provide

Who Better to Find Useful iPad Apps for Students than...Students!  
Dr. Jorgianne Robinson used iPads with her Consumer Psychology class during the Fall of 2012. Robinson chose to approach the problem of finding useful apps for her students in a different, open-ended way. She turned the process around and offered them a small amount of extra credit if they found ways to use the iPads to create and/or deliver their final class projects, and reported those back to her. Many of the apps that the students reported using were general purpose and organizational in nature, but they offer a valuable look into how students choose to use the devices when given the freedom and flexibility to make that decision on their own.

Some Apps That Dr. Robinson’s Students Reported Using

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Apps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class on-line community page</td>
<td>Edmodo</td>
</tr>
<tr>
<td>Note-taking, recording, observational research</td>
<td>Evernote, Microsoft OneNote, Notability</td>
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<tr>
<td>Paper Planning</td>
<td>Mindmeister, Syncspace</td>
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<tr>
<td>Presentation App</td>
<td>Keynote, Nearpod</td>
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<tr>
<td>Remote Computer Access</td>
<td>Teamviewer</td>
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<tr>
<td>Share photos and visuals</td>
<td>Instagram, Popplet</td>
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<tr>
<td>Share Microsoft documents</td>
<td>Documents to Go</td>
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any additional benefit to them for a number of these regular classroom activities.

Also, students continue to note that they already have their own devices (laptops, phones, and tablets) that they carry to class and are allowed to use with their instructors’ permission. Carrying an iPad that is required for just one class represents, to many students, an additional burden to bear.

2. Using iBooks Author, or a similar program, to develop an e-textbook or deliver e-materials.

Only one instructor specifically chose to use iBooks Author during this academic year. A number of other instructors did, in the course of finding ways of using the iPad to engage their students in class, did end up essentially delivering e-materials to students. PDFs versions of readings were used in a couple of classes that experimented with loading them into collaborative apps to encourage activities like group note-taking.

The instructor that used iBooks Author found the iBooks Author software to be relatively simple to learn, but mentioned that some aspects of the interface made process of creating materials extremely time-consuming.

Students found that one of the biggest advantages that these “iBooks” offered them was the ability to find content, tools, and materials that they are typically required to visit a number of sources to access, gathered together in one place, and accessed via one common interface.

Looking Ahead

During 2013-2014, the Center for Instructional Technology has elected to continue to investigate the same two overarching themes regarding the use of iPads in education: Using iPads to engage students in class and Using iBooks Author, or a similar program, to develop an e-textbook or deliver e-materials.

Additionally, CIT will begin to investigate how we can support instructors who wish to encourage students to use their own personal devices to complete instructional activities both inside and outside of the classroom.

Creating an iBook to Facilitate Intensive Language Instruction

To help students in her Intensive Elementary French course study, Sandra Valnes Quammen created “e-pamphlets” – short iBooks composed with iBooks Author that contained audio clips and interactive features like short, creative quizzes.

Although Valnes Quammen points out that there are some quirks with the iBooks Author software, and that distribution of the finished iBook can be problematic, using the software was relatively straightforward, and it offered a number of useful features.

All of the tools offered via these iBooks was available to her students in the past, but Valnes Quammen noted that they appreciated that the e-pamphlets co-located them in one single place.

More Information: bit.ly/17Bx9Fg

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