

# DIGITAL FLAGSHIP

Summary Literature Review and Related Recommendations  
 Dr. Shanna Jaggars, Director of Student Success Research  
 Marcos Rivera, Graduate Research Associate, Student Success Research

## BACKGROUND

We reviewed existing research on tablet use and deployment in higher education, beginning with 74 scholarly articles, which we narrowed to the 27 most relevant in terms of the use, benefits, and challenges of mobile devices in postsecondary environments. Unfortunately, the current research literature is not strong. Quantitative methods were typically not rigorous and focused on short-term rote memorization rather than deep or sustained learning. Qualitative studies tended to focus on self-reported perceptions of mobile devices.

While the literature does not provide a robust and rigorous evidence base for practical recommendations, we extracted some potentially-useful directions for practice, as synthesized below. The state of the literature also suggests we have a strong opportunity to contribute valuable research to the field.

## Practical Implications of the Literature

### Device Configuration

- ▶ Bundle physical keyboards and styluses with tablets. Curate a standardized suite of apps relevant to the following tasks: note-taking (cloud uploads, collaboration, handwriting recognition), accessing course materials (e.g., Canvas, Coursera, iBooks, iTunesU), storing in the cloud (e.g., iCloud, Dropbox, Buckeye Box), annotating and formatting PDFs, presenting (e.g., PowerPoint, Keynote, Prezi), word processing, creating multimedia content (e.g., YouTube, VoiceThread, iMovie), applying STEM content (e.g., MedCalc, Epocrates), and navigating student life (e.g., calendaring, maps, class schedules, advising, library access, grade tracking).

### Student Fluency

- ▶ Integrate iPad demonstrations throughout orientation (e.g., DLC might highlight study skills apps, ODI might highlight digital support groups, Moonlight Tour might use constellation maps); identify or develop online training / examples of how to use the most critical academic

apps (e.g., Canvas, note-taking app); offer an iPad-focused “example class” for orientation students and parents; enable push notifications for important and challenging times of the year (e.g., personalized reminders of registration windows and financial aid deadlines); ensure tech support is seamless and responsive; and incentivize continued student learning (e.g., certificate programs, Hackathons, and video contests for students to submit innovative uses of the iPad).

### **Instructor Integration**

- ▶ Provide editable templates for syllabi, outlining instructors’ expectations regarding students’ iPad etiquette and usage; encourage 1000-level course instructors (especially survey course instructors) to direct students to online training / examples of the most critical academic apps for their courses; implement a “train the trainer” model for departmental IT and ID staff to learn how to support their instructors in terms of iPad integration; incentivize first-wave faculty adoption through DFE; seed the development of “communities of practice” (COP) within naturally-occurring faculty clusters, beginning with instructors of key 1000-level courses; and leverage the first cohort of DFEs to serve as peer leaders and COP facilitators.

### **Student Impact**

- ▶ In order to positively influence students’ learning outcomes, research suggests the critical importance of supporting the three areas above (effective device configuration, student fluency, and instructor integration). Ideally, classroom integrations of the iPad should focus on moving instruction away from “knowledge transmission” and toward “learning facilitation” techniques. Overall, during the 2018-2019 academic year ODEE will need to: roll out devices configured to increase student productivity; work with units across the university to provide student support within orientation and across the first-year experience; engage a first wave of faculty to thoughtfully integrate iPad-enabled student-centered activities and assignments into selected freshman-level course sections; and provide tips, tools, and support for the broader base of faculty. In the subsequent year or two, ODEE will need to design and pursue a more ambitious strategy to actively engage the broader base of faculty in terms of iPad integration.