## **Higher Education Mobile Frameworks**

Below is a limited set of top mobile frameworks (i.e., coding templates) that meet some or all of the following criteria:

- Popular and highly used, especially in the higher education environment
- Developed by or in partnership with a higher education institution
- Highly rated product with large user base, as determined by an informal web search
- Based on industry standards and therefore easy to adopt

#### **Higher Education Mobile Web Frameworks**

This product category consists of frameworks built out of collaborative efforts to address the overall mobility needs of a university. These products are mainly open-source efforts and emphasize integration into current campus systems. Their installations typically include common university mobile tools like maps, directories, news, calendars, and courses, but can often be extended to support standard data feeds. Examples of higher education mobile frameworks include:

- MWF
- Kurogo
- Kuali Mobility
- Jasig uMobile

#### **Packaged/Hosted Solutions**

This product category consists of packaged commercial solutions, typically offered as a hosted solution. The vendor will usually have a set of prebuilt applications, along with a specification of the data feeds that these applications can accept (e.g., XML, iCal, JSON, RSS, etc.). Examples of packaged/hosted mobile solutions include:

- SunGard Mobile Connection
- Blackboard Mobile Central

#### **Native Apps and Code Generators for Native Devices**

Tools used to build native device applications, like native iPhone and Android apps, include:

- PhoneGap
- Appcelerator Titanium Mobile
- iPFaces
- Rhomobile

#### Mobile Web Apps and JavaScript Libraries

Mobile web apps are standard Internet-enabled websites and web apps that run on any browser, including a handheld device's web browser. A JavaScript library is a library of prewritten JavaScript modules and features that allow for easy development of mobile applications or websites. Examples of JavaScript modules within a mobile framework may include user interface elements, as well as feature-rich actions for animations and page transitions. JavaScript libraries are not specific to the higher education industry. Examples of JavaScript libraries include:

- ¡Query Mobile
- Sencha Touch
- jQTouch
- Zepto.js
- Wink Toolkit
- WebAPP.net

# Higher Education Mobile Frameworks, Cont.

### **Responsive Web Design Frameworks**

Responsive web design (RWD) produces one single website or web app that that looks and feels custom made for any device and browser, mobile or not. Premade HTML and CSS frameworks bundle libraries and functionality and ensure compliance on various browsers. Examples of RWD frameworks include:

- Twitter Bootstrap
- Skeleton
- Less Framework
- Amazium