Tips for Educators: Mobile App Creation
Lessons Learned from AzteCast

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Building a Bridge Between the Knight News Challenge and JMC Programs

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1. Collaboration with other departments. Find a way to collaborate with other relevant departments or units on campus for the creation of the mobile app – don't do it alone. Collaborate with faculty in graphic design, computer science, geography or engineering departments.

2. Resources for hosting the mobile app. Identify where you will house your website and mobile app for your project. Sometimes your own university can offer a discounted hosting service for faculty/staff. In other cases it may be good to go with an external vendor – such as Amazon Web Services (http://aws.amazon.com/ec2/). Also be aware of the policies that come with hosting your app and website through the University or an external vendor.

3. Identify students a semester before to help generate interest. If you are going to make this mobile app project a class, it's important to have a passionate and interested group of students about the topic to make the class a successful one. We started contacting students in the fall to find out which ones may be interested in taking it in the spring. It gave us a good baseline to know what kind of students would take the class and what the enrollment figures could be. It allowed us to know what other ways we could recruit students to take the course from within our school as well as from other departments (e.g. computer science). This kind of planning made the first day of class a lot easier to plan for.

4. Equipment complications. It's always good to have a plan B. As it relates to mobile apps, plan on having equipment complications. These complications can include computers without the applications you need, mobile devices that vary based on operating systems and mobile apps that may not always work according to plan. Be prepared for these complications with a plan B such as the use of mobile app emulators when your students may not necessarily have the latest smartphones you may need to test the app on.

5. Don't be rigid in your planning. The project will change as the dynamics of the group change and the resources change. We started out the semester with thinking our app was going to do everything (capture and map all kinds of news on campus and off campus) and we realized halfway through that it was too much. We decided to focus on simplicity and focus on doing one thing well – so we now have an app that just maps events on campus.

6. Go simple. Often times we may have big plans to do all and everything but sometimes the best thing is to go simple. This is like point five above. We realized halfway through the semester with the assistance and advice from Brian Boyer – that we should aim to do one thing – and do that one thing well.

7. Guest speakers. As educators we may feel we are the expert or the sound of reason in the class to help the students know what they need to move forward on the project. Having guest speakers come to the class from different fields and disciplines can open their eyes to looking at the project differently and can also help solidify the points you have been making with the students during the semester. Throughout the semester I invited a variety of guest speakers to the class to help open the students' minds to new ideas and concepts. Some of the guest speakers had a background in mobile apps whereas others worked in the areas of journalism, data journalism, the open-source movement and more. Bringing in these different kinds of speakers can help the students to see the application of the mobile app in different contexts. Also, if you are using a specific platform or technology for your mobile app, find a way to invite the creators to come and speak with the students.

8. **Exploration survey.** For the lab/skills-based classes I teach, I always give my students an exploration survey on the first day of the class. The survey consists of questions about the students' proficiency levels with specific applications, technologies, concepts, etc. The survey included questions regarding the students' knowledge about mobile devices, what kind of mobile phone they had, what they did with their mobile phone, the kind of apps they used, the kind of programming languages they were familiar or not familiar with, etc. These surveys helped to provide me with a baseline of what the knowledge base was of each student and what I needed to focus on in the weeks ahead as we built the app.

9. **Creativity exercises.** To help the students with thinking openly and differently about the creation of mobile apps, having some exercises that encourage brainstorming and creativity can be helpful. One exercise I did that helped with creativity was IDEO cards. The cards each have a different scenario and idea to help spur ideas, concepts and much more. If you don't have access to IDEO cards, you can create your own with different kind of scenarios. More about the 51-card deck of Method IDEO cards can be found here: http://www.ideo.com/work/method-cards/

10. **Allow autonomy.** As educators we may often want to help lead and direct the path of the class and we should but there are moments in projects as innovative as this that you have to let go and allow the students some freedom. Give the students freedom to explore ideas, test out and experiment with concepts and allow them to make their own decisions. Ultimately you may know that failure is likely with some aspects of the project – but they will arrive there on their own without you having to tell them. This allows them room to grow and expand their learning and how it has changed.

11. **Self-reflection.** Make sure to provide opportunities throughout the course – not just at the end for the students to reflect on where they have been and where they are going with the project. In the class, I had the students write up several reports (competitive analysis, focus group reports, and sustainability reports) as well as weekly blogs that allowed the students to think about what they learned and how it could be applied moving forward.

12. **Plan B, C.** Be prepared to have a back-up plan for your project. You may be the most organized person in the world and have the resources you need to get things accomplished – but digital projects will never go as planned. Be prepared to have a plan B or C ready to go in case some part of the project won't be possible. It will save you a lot of grief in the end.

13. **Time – always think it will take twice as much time**. Following the item above, you may be super organized and think you have the calendar set for how long each part of the project will take – but always think it will take twice as much time. In the last four weeks of the course, we were in a crunch mode of completion – something I didn't think would happen but did. Of course all came out well, but having this mindset from the beginning probably would have made the process smoother.

14. **Most of all – enjoy the process!** The students will feed off of your passion and excitement if you are excited and passionate about the project too. Make sure to take moments to enjoy the experience throughout the semester – the challenges and the achievements. As cliché as it sounds, it's about the journey not just the destination.