

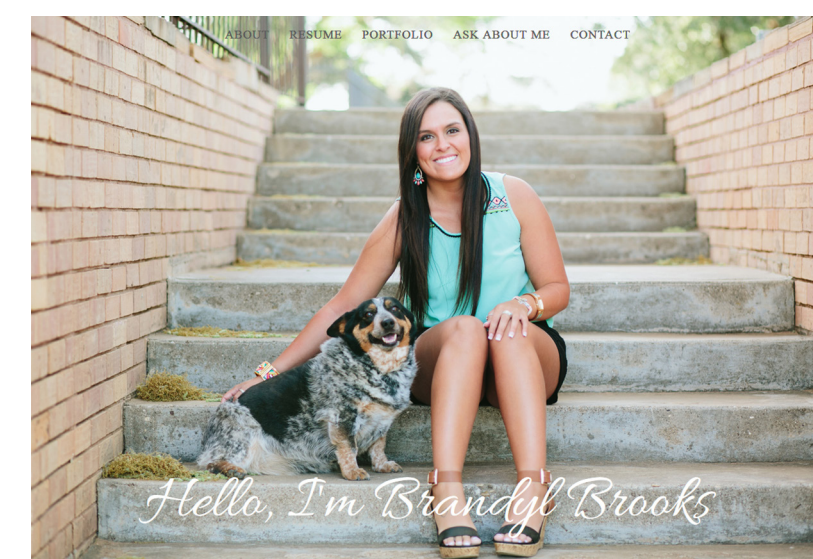
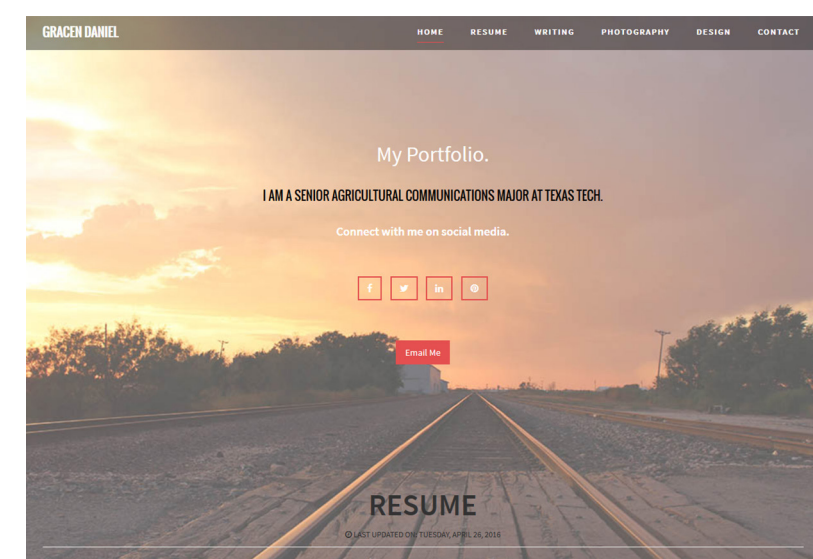
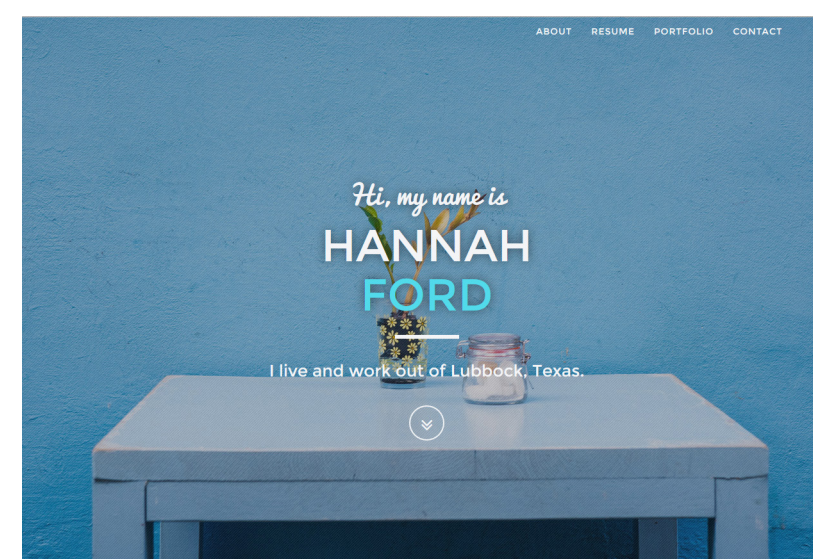
The Struggle is Real: Learning Responsive Web Design with the Bootstrap Framework



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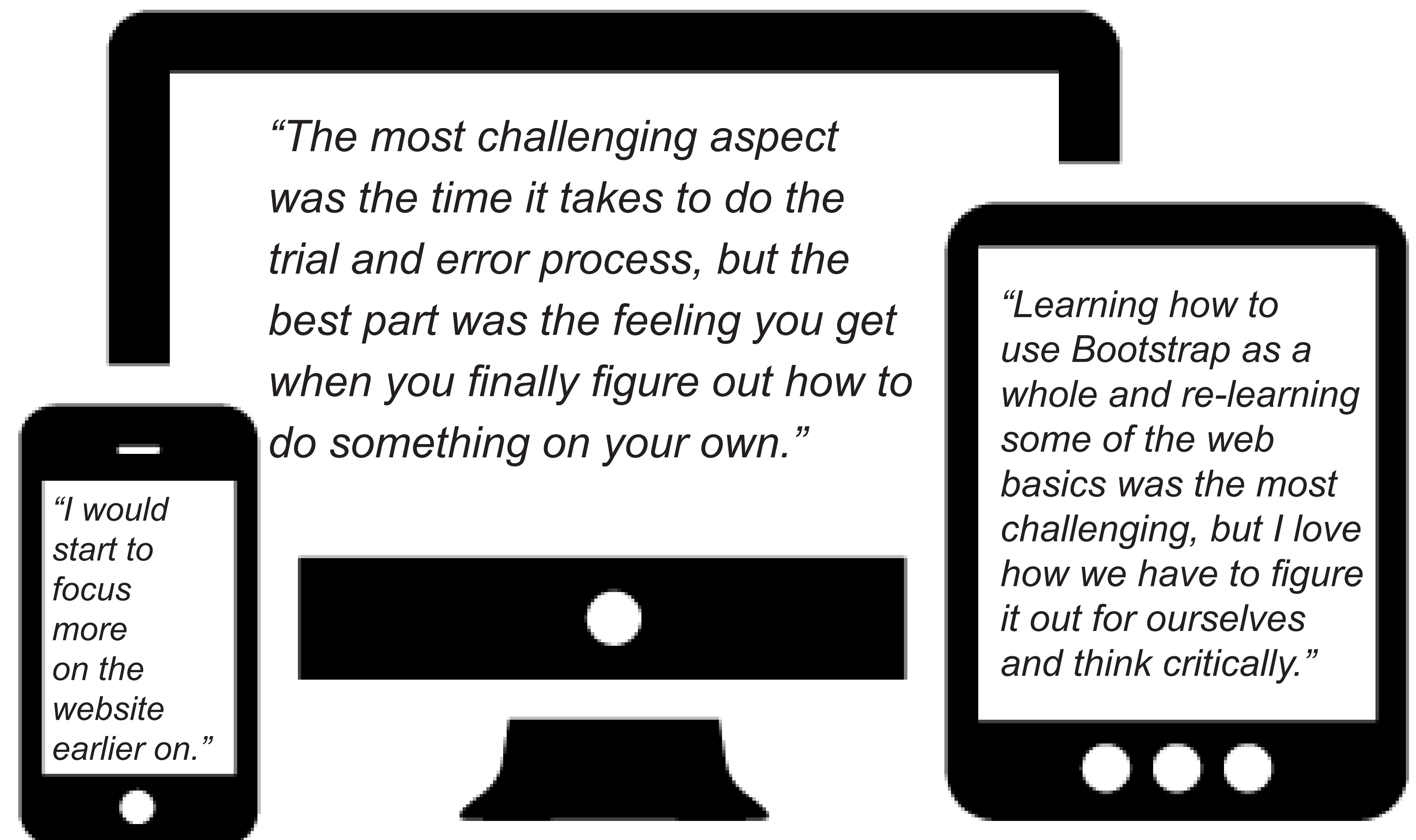
<h1>Introduction</h1>

- Sixty-eight percent of Americans have smartphones, 45% have tablet computers, and the market continues to grow (Anderson, 2015)
- Responsive web design (RWD) is an approach to building websites to provide users with an optimal viewing and interaction experience across a wide range of devices.
- Although there are many ways to create a responsive website, using the Bootstrap framework is the most popular and is accessible for people of all skill levels, projects, and devices (Bootstrap, n.d.).
- The purpose of this innovative idea was to integrate Bootstrap in a web design course and determine students' opinions of this approach to responsive web design.



<h1>Results to Date</h1>

- Fourteen students completed the course in the Spring of 2016
- Students were allowed to use templates they could find online, which benefitted some but not others.
- The majority of students agreed that using Bootstrap to create a responsive website was difficult at the beginning, but they eventually grasped the concept
- Almost every student said they wished they had more time to work on their website, and that they would have started working with Bootstrap earlier in the semester.
- Students said the most difficult aspect of using Bootstrap was also the best part of their experience — having to teach themselves how to use the framework.



<h1>How it Works</h1>

- Students in the Convergence in Agricultural Media course at Texas Tech University create a responsive professional online portfolio using Bootstrap in Adobe Dreamweaver
- During the first four weeks of class, the students were taught what RWD is, why it is important, and the coding language necessary to make it work
- In the fifth week, the students were introduced to Bootstrap and how to use it in Dreamweaver.
- During the next few weeks, the students worked independently on their websites and in class as time allowed (other projects were due during this time).
- The sites were then due within a week of this last class session with additional help sessions scheduled as needed.

<h1>Future Plans & Advice</h1>

- RWD as a concept and Bootstrap as the framework will be taught in the introductory Web design course and the Convergence class.
- More class time should be dedicated to teaching students about Bootstrap and RWD, perhaps by creating an entire site together then having students create their own.
- Although they did have to submit a proposal for their site, this was due before they learned the capabilities in Bootstrap, which certainly influenced their design outcomes.
- Overall, students need to understand how changing consumer behaviors (i.e. using mobile devices) impact why RWD is necessary.

<h1>Resources Needed</h1>

- Students needed access to Adobe Dreamweaver, which was required in this class
- Dreamweaver Creative Cloud comes with Bootstrap integrated; however, the Bootstrap framework can be downloaded for free from www.getbootstrap.com
- The instructor invested time learning Bootstrap and provided links to responsive website examples and resources.

<h2>References</h2>

Anderson, M. (2015, October 29). Technology device ownership: 2015. Retrieved from <http://www.pewinternet.org/2015/10/29/technology-device-ownership-2015/>

Bootstrap. (n.d.). The world's most popular mobile-first and responsive front-end framework. Retrieved from <http://getbootstrap.com/>