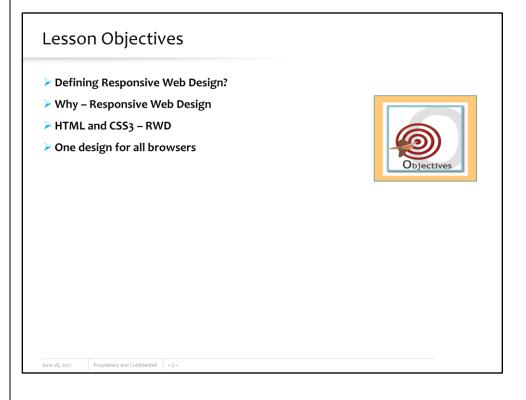
Instructor No



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Defining Responsive Web Design

- Accessing Web pages from mobile devices is the need of the hour. Far more people are now browsing websites on a mobile phone than with a desktop or laptop
- So, there are a growing number of people using small screen devices to browse the Internet, and the Internet browsers of these devices have typically been designed to handle existing websites without problems.
- They do this by shrinking a standard website to fit the viewable area (or viewport to give it the correct technical term) of the device.
- The user then zooms in on the area of content they are interested in. But is it responsive?

The goal of responsive design is to build web pages that detect the visitor's screen size and orientation and change the layout accordingly.

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Defining Responsive Web Design

- Well, the more you browse websites, such as the one shown in the preceding screenshot, on iPhones and Android powered handsets, the more apparent the reasons become.
- It's a tedious and frustrating task to constantly zoom in and out of page areas to see them at a readable size and then move the page left and right to read sentences that are hanging out of the viewport just enough to be annoying, whilst not inadvertently tapping a link you don't want to.
- Surely we can do better!

Responsive web design (RWD) is a **web development approach** that creates **dynamic changes** to the appearance of a website, **depending on the screen size and orientation** of the device being used to view it. RWD is one approach to the problem of designing for the multitude of devices available to customers, ranging **from tiny phones to huge desktop monitors**.

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Defining Responsive Web Design

Adapt to the size of the visitor's viewport.

- Other Terminologies:
 - fluid design, elastic layout, rubber layout, liquid design, adaptive layout, cross-device design, and flexible design.
- 3 key design techniques in RWD:
 - flexible grid layout
 - flexible images
 - media queries

the presentation of content in the most accessible manner for any viewport that accesses it. Conversely, a truly "mobile website" is needed when an experience requires specific content and functionality based upon the device accessing it. In these cases, a mobile website presents an entirely different user experience to its desktop equivalent.

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Responsive web design benefits designers, developers, businesses and, most importantly, users in the following ways:

1. More Mobile Traffic

According to a <u>report from SimilarWeb</u>, more than half of traffic to top websites in the U.S. came from mobile devices in 2015. Therefore, it's increasingly important for companies to have websites that render properly on smaller screens so that users don't encounter distorted images or experience a suboptimal site layout. While some businesses still choose to have a separate version of their website for mobile users, responsive design is becoming the norm because it offers greater versatility at lower development costs.

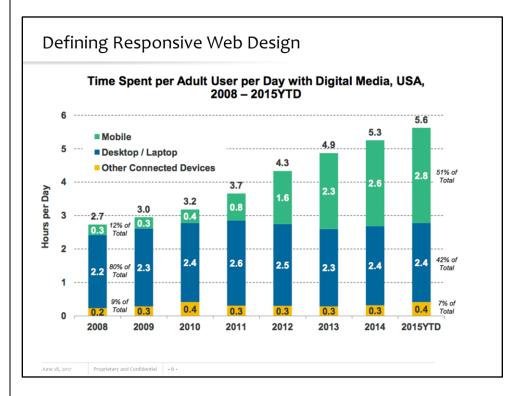
2. Faster Mobile Development at Lower Costs

Making one responsive website takes considerably less time than making a stand-alone mobile application in addition to a standard desktop website. Since time is money, responsive design naturally **costs less than the alternative**. Even if the initial investment of a responsively designed website does end up comes out to being more expensive than creating two separate websites, you'll end up saving in the long run due to maintenance costs, special configuration costs, etc of a website that uses two separate versions.

3. Lower Maintenance Needs

Maintaining a separate mobile site requires additional testing and support. In contrast, the process of responsive design uses standardized testing methodologies to ensure **optimal layout on every screen**. Having separate desktop and mobile sites also necessitates two content strategies, two administrative interfaces and potentially two design teams. Responsive design's "one size fits all" approach means less headache for developers, business owners, and consumers. Spending less time on maintenance also frees up time to focus on more important things like marketing and content creation.

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4. Faster Webpages

Mobile users in particular have short attention spans. Studies show that mobile visitors tend to abandon webpages that take longer than three seconds to finish loading. If a site isn't optimized for smartphones and tablets, it will also take more time to navigate, which can frustrate customers to a point of no return. Ensuring that your responsive website uses modern performance techniques such as <u>caching</u> and responsive image display will help **improve your webpage's loading speed**.

5. Lower Bounce Rates

A responsive and optimized mobile site provides a much better user experience for the visitor. Therefore, it is much more likely that they'll stick around for a longer period of time and explore different areas of your site. Alternatively, if your site isn't responsive, it is much harder to keep the visitor engaged and therefore more likely that they'll bounce.

6. Higher Conversion Rates

Lowering your bounce rate is only half of the battle. Creating a consistent user experience across all devices is key to **converting new customers**. When users are deciding whether or not to subscribe to a service, they don't want to be redirected to device-specific websites because the process often takes longer. Having a single secure website that looks professional on all platforms makes users less likely to get frustrated or turn to a competitor.

7. Easier Analytics Reporting

Knowing where traffic is coming from and how users interact with your website is necessary to make informed improvements. Managing multiple versions of a website requires developers to track users' journeys through multiple conversion paths, funnels, and redirects. Having a single responsive site **greatly simplifies the monitoring process**. Google Analytics and similar tools now cater to responsive websites by condensing tracking and analytics into a single report so that you can see how your content is performing on different devices.



8.Improved SEO

Responsive web design is becoming as important to search engine optimization as quality content. Stronger backlinks and better bounce rates translate into higher search rankings, but there's an extra SEO benefit for mobile optimized sites.

Starting April 21, 2015, Google Search will be expanding its use of mobile-friendliness as a ranking signal. – Google

Having a single responsive website rather than separate desktop and mobile versions avoids the issue of duplicate content, which can negatively impact your search ranking.

9. Improved Online Browsing Experience

First impressions are everything, so whether someone is visiting a website for the first time from their desktop or their smartphone, you want them to have a consistently positive experience. If visitors must do a lot of zooming, shrinking and pinching their screens during their first visit, they're likely to give up and try another website.

10. Improved offline browsing experience

Now that many smartphones and tablets are HTML5 enabled, responsive web design benefits users by making it easier to continue viewing content within HTML5 web applications without an internet connection. Learn more about HTML5 Application Cache.

HTML and CSS3 - RWD

- Responsive Web Design makes your web page look good on all devices (desktops, tablets, and phones).
- Responsive Web Design is about using CSS and HTML to resize, hide, shrink, enlarge, or move the content to make it look good on any screen
- Responsive web design uses only HTML and CSS.
- Responsive web design is not a program or a JavaScript.
- Web pages should not leave out information to fit smaller devices, but rather adapt its content to fit any device
- Responsive design can also be implemented using frameworks like Bootstrap

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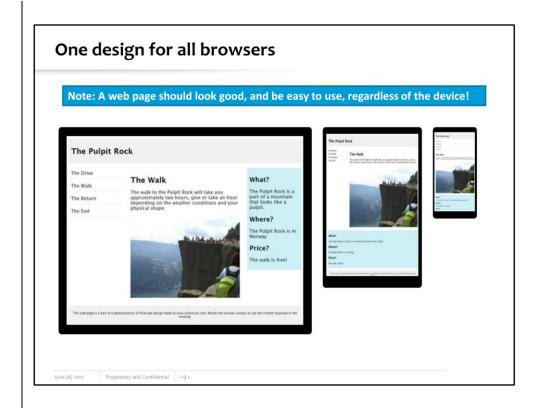
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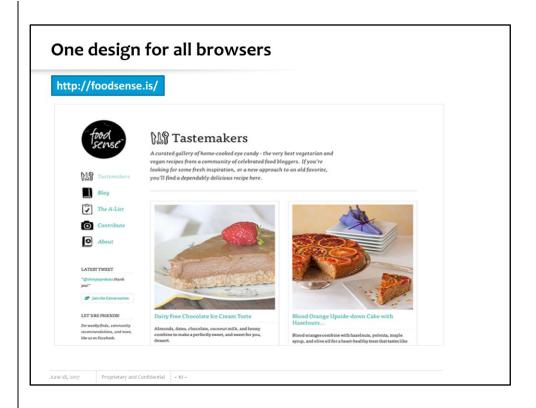
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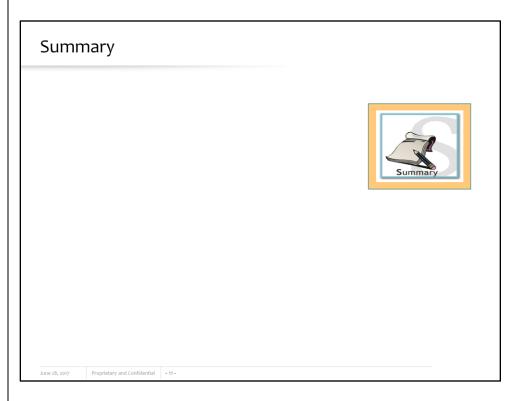
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