Accessibility
Without the LMS

Siri Balusani, Accessibility Consultant

Gies Accessibility Team – Jinhee Choo, John Tubbs
“Extended transcript” to provide equal access to our video, whether used in the MOOC or locally
The Extended Transcript: Usability

Replaces the less than adequate transcript, and lecture support files with a single document

…easily converted to other formats

…not a different “accessible” page

…modifiable by student to fit their personal preferences
The Extended Transcript: Goals

Single document (module by module)

Downloadable

Combines all module content to meet accessibility and, more importantly, **usability** needs
The Extended Transcript: Usability

May not meet some accessibility hard rules

...reduces redundancy

Plays on any device

...consumable on the student’s device of choosing
The Extended Transcript: Supports

Standard accommodations for auditory disabilities

  Transcripts are core of document

  Captions in embedded video
The Extended Transcript: Supports Non-standard accommodations

SmartPlayer allows for "cross-accommodation" media consumption

“Screen reader users may also prefer the transcript over listening to the audio of the web multimedia. Most proficient screen reader users set their assistive technology to read at a rate much faster than most humans speak. This allows the screen reader user to access the transcript of the video and get the same content in less time than listening to the actual audio content.”

https://webaim.org/techniques/captions/
Specifics of Our Transcript

- One doc/module with multiple lessons
- TOC
- Smart Player
- Slide from the power point
- Text description of slide
- Transcript for that slide
- HTML bullets
- MathML if needed
- Tables
- Link for excel sheet
- Citations

Rinse, Lather, Repeat…
Module 4 Exploring and Producing Data for Business Decision Making

Contents

Lesson 4-1 Confidence Interval Basics
Lesson 4-1.1 Confidence Interval Basics

Lesson 4-2 Confidence Interval for Means
Lesson 4-2.1 Confidence Interval for Means
Lesson 4-2.2 Confidence Interval for Mean in Excel
Lesson 4-2.3 Impact of Confidence Level Illustrated in Excel

Lesson 4-3 Confidence Interval for Population Proportion
Lesson 4-3.1 Confidence Interval for Population Proportion
Lesson 4-3.2 Confidence Interval for Population Proportion in Excel
Lesson 4-3.3 Confidence Interval Animation in Excel
Lesson 4-3.4 Starting Salary Example in Excel

Lesson 4-4 Sample Size
Lesson 4-4.1 Sample Size
Lesson 4-4.2 Sample Size Proportion in Excel
Lesson 4-4.3 Sample Size Mean in Excel
Lesson 4-4.4 Sample Size Effect in Excel
I'm sure that some of you are still wondering but why you need to learn statistics or why do so many organizations are looking for people who understand how to use statistical methods. Just recently, CareerCast, a web-based employment service listed the best jobs of 2016 and once again, we see statistics on the top of the list. Speaking to the enormous need for scientists who will be slicing and dicing the data companies have so that they can improve their decision making. So, for you as someone who's interested in leadership roles, this is also important. If you don't ask the right questions, then the analysis done by the most talented statisticians will be of very little use. You need to be able to understand statistical analysis, ask the right questions, and shape the future of the inquiries. In this module, we are now ready to begin the process of making inferences. So, let's get started.

Lists: Bullets and Numbers

Use bullets and numbers when there is an:

- Ordered or,
- Unordered list
- Not a phrase of sentence

Lesson 4-1 Confidence Interval Basics

Lesson 4-1.1 Confidence Interval Basics

Major Purpose of Statistics (1 of 2) - Slide 1

MAJOR PURPOSE OF STATISTICS

• Why is learning statistics important?
• Why are so many organizations looking for people who understand how to use statistical methods?

The Best Jobs of 2016*
1. Data scientist
2. Statistician
3. Information security analyst

ALT TEXT is not used

- Redundant
- Confusing

Set design and stick to it
Description balances describing every detail and the general idea. It’s difficult!

Depend on other inputs:

- Related data tables
- Tactile devices
- Most importantly, the instructor’s voice
The graph is a scatter plot with no title listed. The horizontal x-axis shows height in centimeters ranging from 130 to 180 in increments of ten. The vertical y-axis shows weight in kilograms ranging from 30 to 90 in increments of ten. The graph contains approximately 100 points that seem to be evenly spread along a linear trend that goes from the lower left corner, where weight and height are small, to the upper right corner, where both quantities are large.
The graph is a histogram that shows the average dollars spent on coffee per month. The horizontal x-axis shows dollars spent on coffee with bins ranging from 5 to 55 in increments of 5. The vertical y-axis shows the height of each bin, which represents frequency and ranges from 0 to 45 in increments of 5.
<table>
<thead>
<tr>
<th>Date</th>
<th>Schedule Start</th>
<th>Schedule End</th>
<th>Location</th>
<th>Topics</th>
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<tr>
<td>Monday, June 1</td>
<td>9:00 a.m.</td>
<td>10:30 a.m.</td>
<td>RH 001</td>
<td>Introduction to Company: Vision and Mission</td>
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<tr>
<td></td>
<td>10:30 a.m.</td>
<td>12:00 p.m.</td>
<td>RH 001</td>
<td>HR Policies Review</td>
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<tr>
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<td>1:00 p.m.</td>
<td>2:30 p.m.</td>
<td>RH 001</td>
<td>Overview of Benefits</td>
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<td></td>
<td>3:00 p.m.</td>
<td>4:30 p.m.</td>
<td>RH 005</td>
<td>Health and Safety Procedures</td>
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**COMPARING z-SCORE AND t-SCORE**

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<tr>
<th>Sample size (n)</th>
<th>Sample standard deviation (s)</th>
<th>t-score</th>
<th>z-score</th>
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<tbody>
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<td>2.04</td>
<td>1.96</td>
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<tr>
<td>1000</td>
<td>7.85</td>
<td>1.962</td>
<td>1.96</td>
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</table>

Introduction to Company: Vision and Mission
Use of Color:
Understanding SC 1.4.1

“The intent of this Success Criterion is to ensure that all users can access information that is conveyed by color differences, that is, by the use of color where each color has a meaning assigned to it.”

https://www.w3.org/TR/UNDERSTANDING-WCAG20/visual-audio-contrast-without-color.html
### Accessible Excel sheet

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MathML Example

Unknown Population Standard Deviation and Small Sample Sizes - Slide 13

UNKnown POPULATION STANDARD DEVIATION AND SMALL SAMPLE SIZES

Equations for confidence interval (\( \sigma \) is known):
\[
\left[ \bar{x} \pm z_{\frac{\alpha}{2}} \frac{\sigma}{\sqrt{n}} \right]
\]

Equations for confidence interval (\( \sigma \) is unknown):
\[
\left[ \bar{x} \pm t_{\frac{\alpha}{2}} \frac{s}{\sqrt{n}} \right]
\]
Example – Accessible Media Player

Without audio description:

With extended audio description:
Example – Accessible Media Player

CaptionSync Smart Player

A VERY POPULAR PROFESSION?

U.S. Business Master's Degrees
Source: U.S. Department of Education

Late 20th century and early 21st century. Let's look at this graph.

U.S. Business Master's Degrees. Source: U.S. Department of Education. X axis years 1970 to 2010 in 5 year intervals. Y axis numbers 20,000 to 180,000 in 20 year intervals. A line starts at 20,000 and 1970 and increases at a 45 degree angle to 165,000 and 2010.

This graph tells us how many business master degrees offered in U.S. business schools. It's a 45 degree line, that means every year there are more people interested in this profession. And it is a universal education, it’s not only in the United States. We know that, according to AACSB, which is the accrediting agency of business schools, there are 739 accredited business schools in 48 countries in the world. And they invest in this education. They built buildings, new facilities, new ways of teaching classes. So it has universal qualities just like any other profession. So what do managers do? If you think of
Publishing Questions

How best to provide offline access – EPUB?

Video files can be large; should we provide multiple bitrate versions?

Content licensing questions
Making This Process More Efficient

Integrated Descriptive Video – Accessible Media Inc.

Faster creation – move the accessibility strategy move early in the course creation process.

Wrap

We are required to do this, there are realities of MOOCs too

There are accessibility standards but “usable” wins

You should focus on the most flexible format to allow adaptability of your materials