Short Assignment for

**Great Ideas: Capstone in Communications**
Communications 495

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**Introduction for Faculty Colleagues**

This assignment was developed for my COM495 Great Ideas: Capstone in Communications (2), a senior seminar course all School of Communications students are required to take. The main task in the course is to write a good research paper so that it can be submitted to a journal.

This assignment will be given out before students collect numerical data. Students need to know how to visualize complex data as a graph or a chart to help their audience understand them quickly and clearly. Many students often felt overwhelmed with numerical data in this course, visualizing data in a wrong way or omitting critical components.

I believe the assignment will help students:

- Describe which elements a visual representation should contain.
- Determine whether a visual represents data correctly.
- Identify areas of strength and weakness of a visual representation.

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**The Assignment I Distribute to Students**

**COM 495 - Great Ideas: Capstone in Communications**

**How to Create Visuals that Represent Numerical Data Correctly and Effectively**

**Assignment**
This exercise requires you to find numerical data and covert it into a bar graph or a pie chart.

**Reason**
It addresses particularly the following course objectives (as listed on the syllabus).
• Students will be able to show an understanding of data and statistics, as appropriate for a selected research project.

• Students will conduct a research project and write a paper appropriate for submission to an academic journal or conference.

**Learning Objectives**
The student will be able to:

• Describe which elements a visual representation should contain.

• Determine whether a visual represents data correctly.

• Identify areas of strength and weakness of a visual representation.

**Target Audience**
This graph or pie chart is created for readers of the Elon Journal, to which your manuscript may be submitted.

**Purpose**
Students will design accurate and easy-to-understand visuals

**Genre**
A visual

**Length**
Less than a page in size

**Level of Polish**
First draft

**Process**
1. Each group acquires a numerical dataset from government census data or from a newspaper or a magazine.

2. Each group converts numerical data into a bar chart or a pie chart that represents the numbers well.

3. Each group explains its visual to the class and asks for feedback as to whether the choice of a visual is appropriate or whether the visual represents the dataset correctly and clearly.

4. Each group orally responds to feedback it received from the class.

5. Each group revised its visual based on the feedback it received.
**Expectation (Criteria)**

- Check the data to make sure that they are correct.

- Include important components, such as title, x-axis, y-axis, legend, source, unit of measurement if needed.
  - Give your graph a title that contains variables and the relationship among them.
  - Label your axes so that readers know what scale points are plotted on.
  - Use the x-axis of a graph for the independent variable and the y-axis for the dependent variable.
  - Bar charts should have an axis with a zero baseline.
  - Describe what each bar and pie piece means by a legend or a linked label.
  - Place labels so that they clearly abut the elements they are labeling.*
  - Place items that are to be compared next to each other.*
  - Label the x and y axes and give units.

- Make sure that if you use color, it is also discernible in black and white. Some people don't have a color printer. Others may be colorblind.

- Keep colors eye-friendly and consistent.

- Scale the size of a bar or a pie piece to accurately represent values.

- If you want to show what a bar or pie piece exactly represents, you should write its size with its units.

- Keep the visual simple; Keep graphical displays free of extraneous materials, no matter how decorative those materials may make the graphic look.*

- Stay away from 3D, which is more difficult to interpret than 2-dimensional graphs.

- Use white space.

- A figure caption should be brief but add value to a visual.
• Use fonts that are large enough to be read without difficulty.*


**Rubric for Grading**

**A: Exceeded Expectation**
Included all important elements; the visual is clearly designed and esthetically excellent; help readers understand data better than the original numbers.

**B: Met Expectation**
Included all important elements; the visual must be refined for clarity; redesigning can help the reader understand the visual more easily.

**C: Not Met Expectation**
Missing important elements; the visual confuses the reader.

**D: Not Met Expectation**
Inaccurate Representation.