PRESENTATION OF HIGHCHARTS

PRESENTED BY:

INSTITUTIONAL RESEARCH

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AGENDA

- Introduction
- Statement of the Problem
- Purpose and Significance
- Review of Literature
- Research Questions
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- Questions
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INTRODUCTION

HighCharts

- Highcharts is one of the leading tools in web charting (Kuan, 2015).
- Highcharts presents very appealing and professional-looking 2D/3D charts on the market.
- This is a product that stands out by paying attention to details.
- The charts are visually pleasant and still the style is simple.
- A JavaScript library completed in late 2009 by the Norwegian company called Highsoft AS, created and founded by Torstein Honsi (Kuan, 2015; Nelli, 2014).

Short History of Web Charting

- Before jumping into Highcharts, it is worth mentioning that web charts evolved from pure HTML with server-side technology to this current client-side (Kuan, 2015).

STATEMENT OF THE PROBLEM

- Most people are apathetic with ordinary charts and therefore, they do not make use of such charts, to the extent that some web pages are unprofitable or uninformative due to the type of charts they feature. That is, some web pages are less visited than others because they have unattractive or unappealing charts.

PURPOSE AND SIGNIFICANCE OF STUDY

Purpose

- To examine the difference between interactive and non-interactive Charts.
- Also, the purpose is to demonstrate Highcharts for better eye-catching interactive charts for web pages.

Significance

- To pleasurably visualize statistical or scientific data
- The cores of a high quality visualization are the simultaneous features represented and the interaction tools which manipulate these features upon event capturing. These manipulations should provide the user the ability to focus on a specific subset of data and hover near other subsets (Eltayeby, Dwayne, Patel, & Simmerman, 2013)

LITERATURE REVIEW

ARE INTERACTIVE CHARTS INTERESTING?

- Interactive charts are visually pleasant (Kuan. 2015).
- External representations boost external cognition and visual thinking, and humans developed a rich set of skills for crafting and exploring them. In addition to mere visual exploration, the manipulation of external representations has been shown to be a key component of external cognition (Jansen & Dragicevic, 2013).
- Manipulations of data that provide the user the ability to focus on a specific subset of data and hover over other subsets (Eltayeby et al., 2013)

ARE NON-INTERACTIVE OR ORDINARY CHARTS INTERESTING?

- Non Interactive charts are not visually pleasant.
- External representations boost external cognition and visual thinking but not as effective as interactive.
- Does not exist in non-interactive charts.

RESEARCH QUESTION

- What is the difference between interactive and non-interactive or ordinary charts with respect to interest?

METHODOLOGY

- Research Design: A Critical evaluation of material to answer the research question.

- Highcharts-Editor: The *Highcharts Editor* is a JavaScript library for Highcharts 5 which enables non-programmers or any user to easily create and publish charts (Highcharts, 2017).

- Excel: For non-interactive or ordinary charts

PROCEDURES

- Highcharts Editor:

1. Go to http://editor.highcharts.com/ ; it's best to use Google Chrome.
2. Click on "Full Edior"
3. Click on "Import"
4. The following table is going to be used as an example:

Categories	New Student	New Transfer Student	Continuing Student	Returning Student	Unclassified
2011	819	670	3303	885	253
2012	738	766	3369	864	323
2013	833	881	3352	803	310
2014	592	799	3493	734	281
2015	846	889	3614	335	420
2016	893	793	3814	284	439

PROCEDURES (CONT.)

You can type the following in the Import box. It's easier to upload a csv file. See "b".

a) Categories,New Student,New Transfer Student,Continuing Student,Returning Student,Unclassified

- 2011,819,670,3303,885,253
- 2012,738,766,3369,864,323
- 2013,833,881,3352,803,310
- 2014,592,799,3493,734,281
- 2015,846,889,3614,335,420
- 2016,893,793,3814,284,439

PROCEDURES (CONT.)

b) You can also import a csv file. The attached csv contains the correct format. Click on this link to see a Youtube video that discusses the layout of the csv file. https://youtu.be/xM_KdeLV41c Click on "Upload & Import File". The data should appear in the box.

c) Delete the "." In the Decimal Point Notation box.

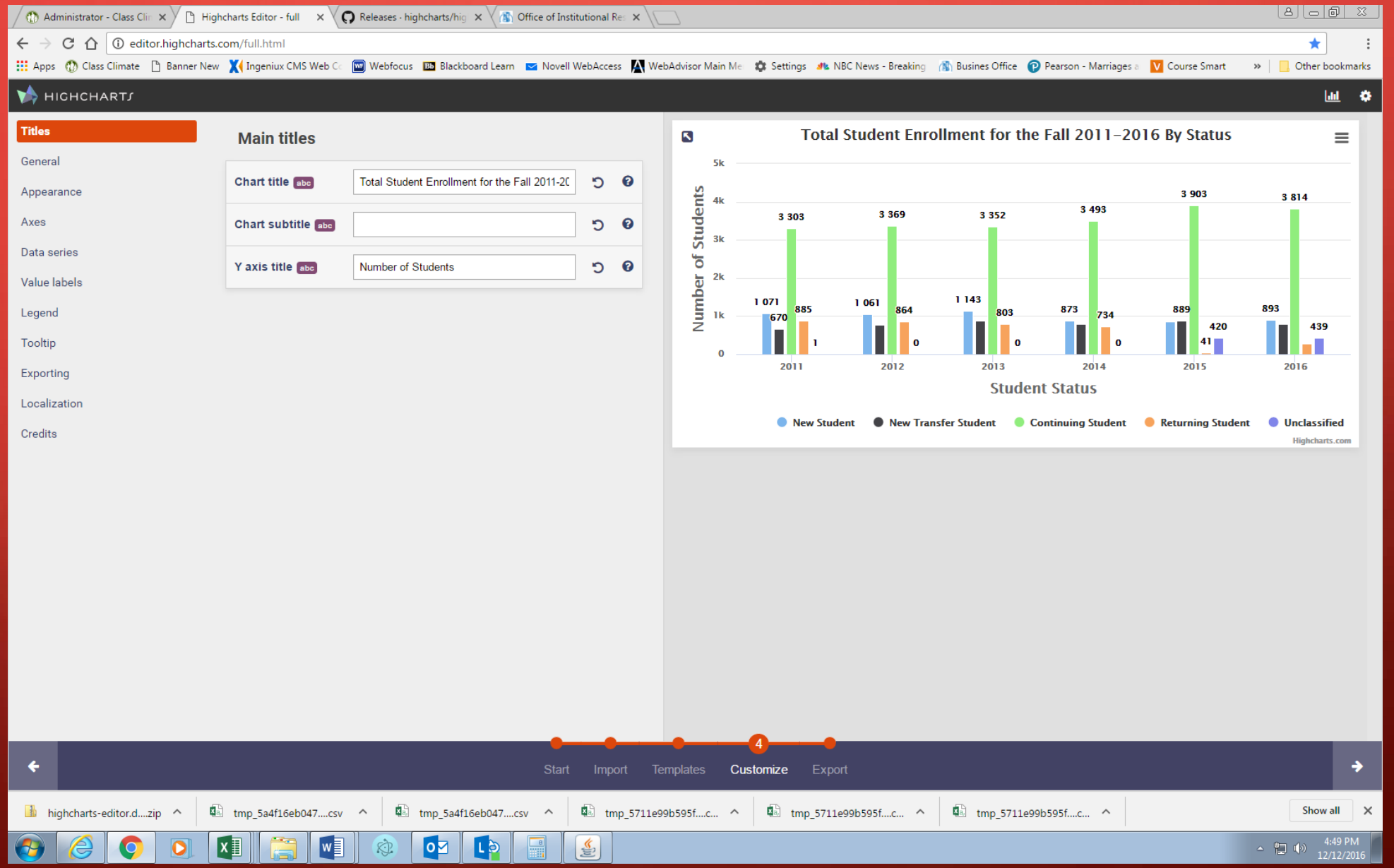
d) Click on the Import button. You should see a preview of your chart.

e) Next, click on Templates to choose the chart you would like. For this example, I chose the Column Chart with Labels.

f) Click on Customize

g) The Titles option gives you the following information. I have typed the information in the boxes. The title, "Total Student Enrollment for the Fall 2011-2016 By Status" should be typed in the Chart Title box. "Number of Students" should be typed in the Y axis title box.

PROCEDURES (CONT.)

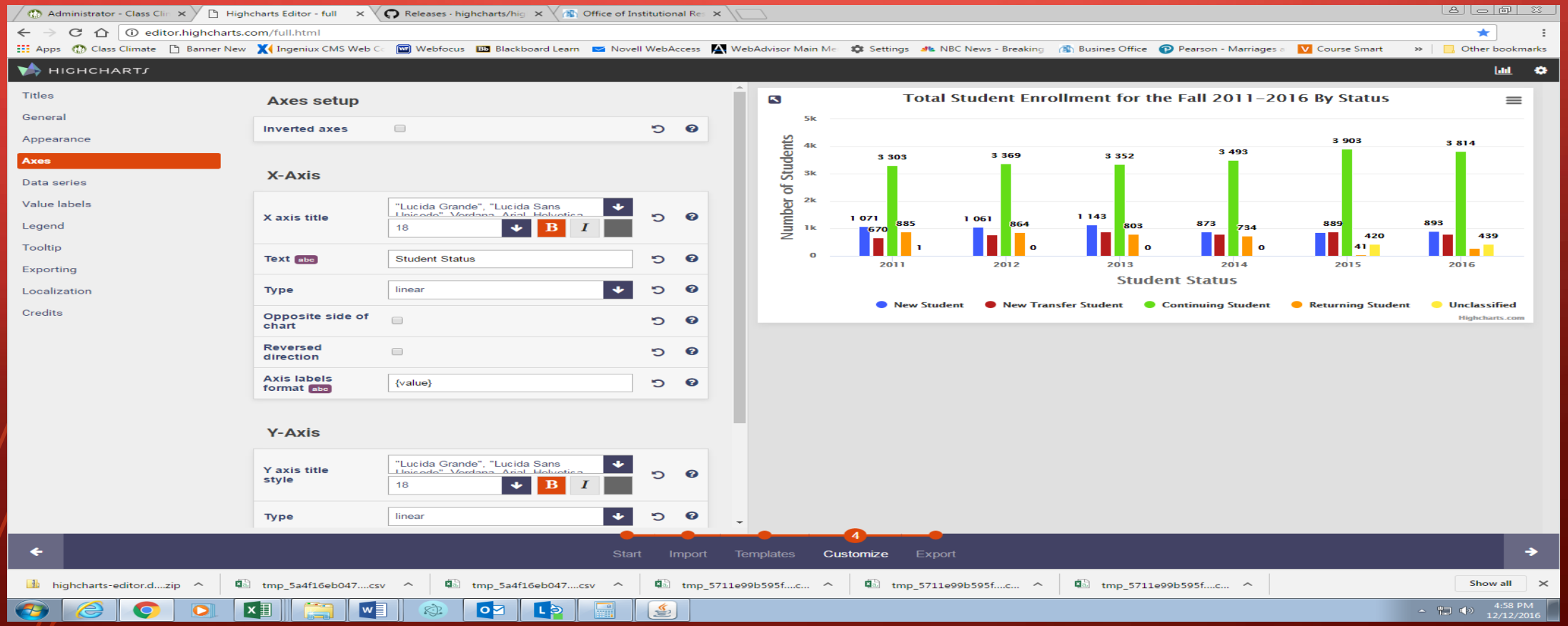


PROCEDURES (CONT.)

h) The Appearance option gives you the chance to change the font and series colors. If you click on the individual series color, you will be given different color options.

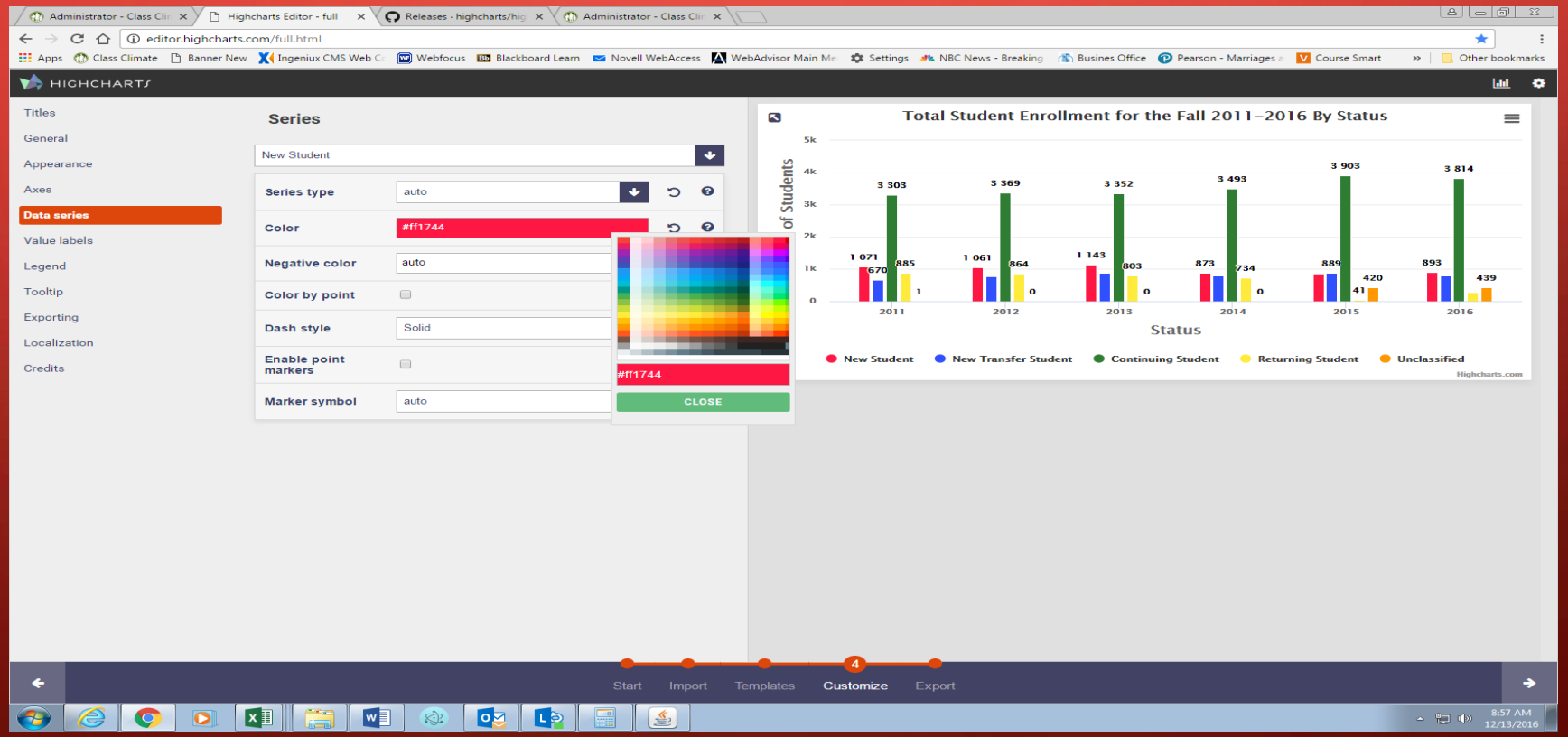
PROCEDURES (CONT.)

i) The Axes option gives you the chance to change fonts and add additional labels to the X axis. I typed “Student Status” into the X-Axis Text box.



PROCEDURES (CONT.)

j) The Data Series option gives you the opportunity to customize individual series color and style. Click on the down arrow next to the first box. Choose the series. Next, hold your mouse arrow over the Color box and click. You will then see a secondary box pop up that will give you color options to choose. You can then repeat these steps with the remaining series.



PROCEDURES (CONT.)

k) The Value labels option allows you to enable or disable data labels for the series by checking or un-checking the Enable data labels for all series box.

l) The Legend options gives you the chance to enable or disable the legend and to change the placement and appearance of the legend.

m) The Tooltip option lets you enable or disable Tooltip and also make changes to the color and border.

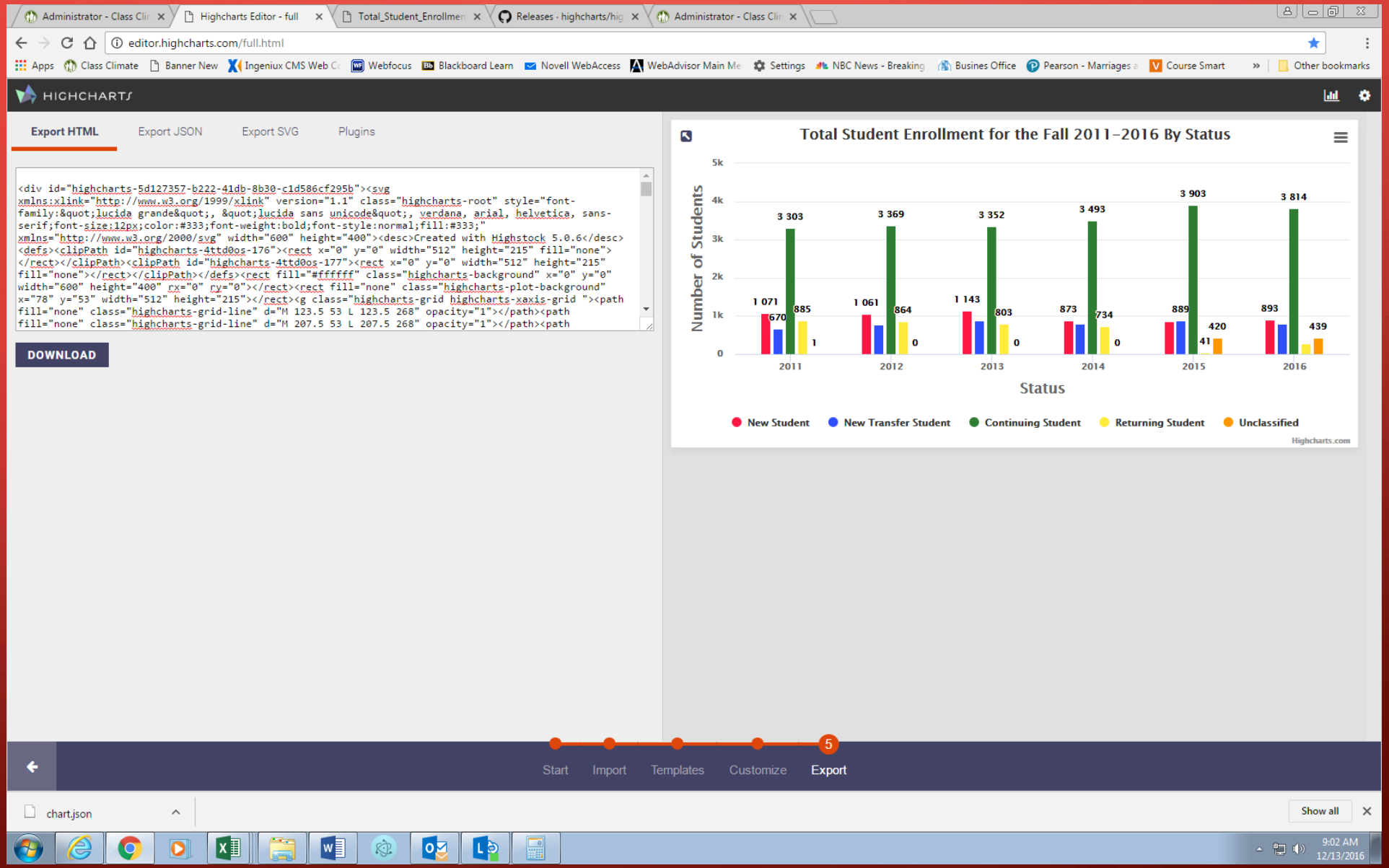
n) The Exporting option allows you to export the html code.

o) The Localization option allows you to change number formatting and to also choose buttons that appear on the menu.

p) The Credits options allows you to enable or disable credits.

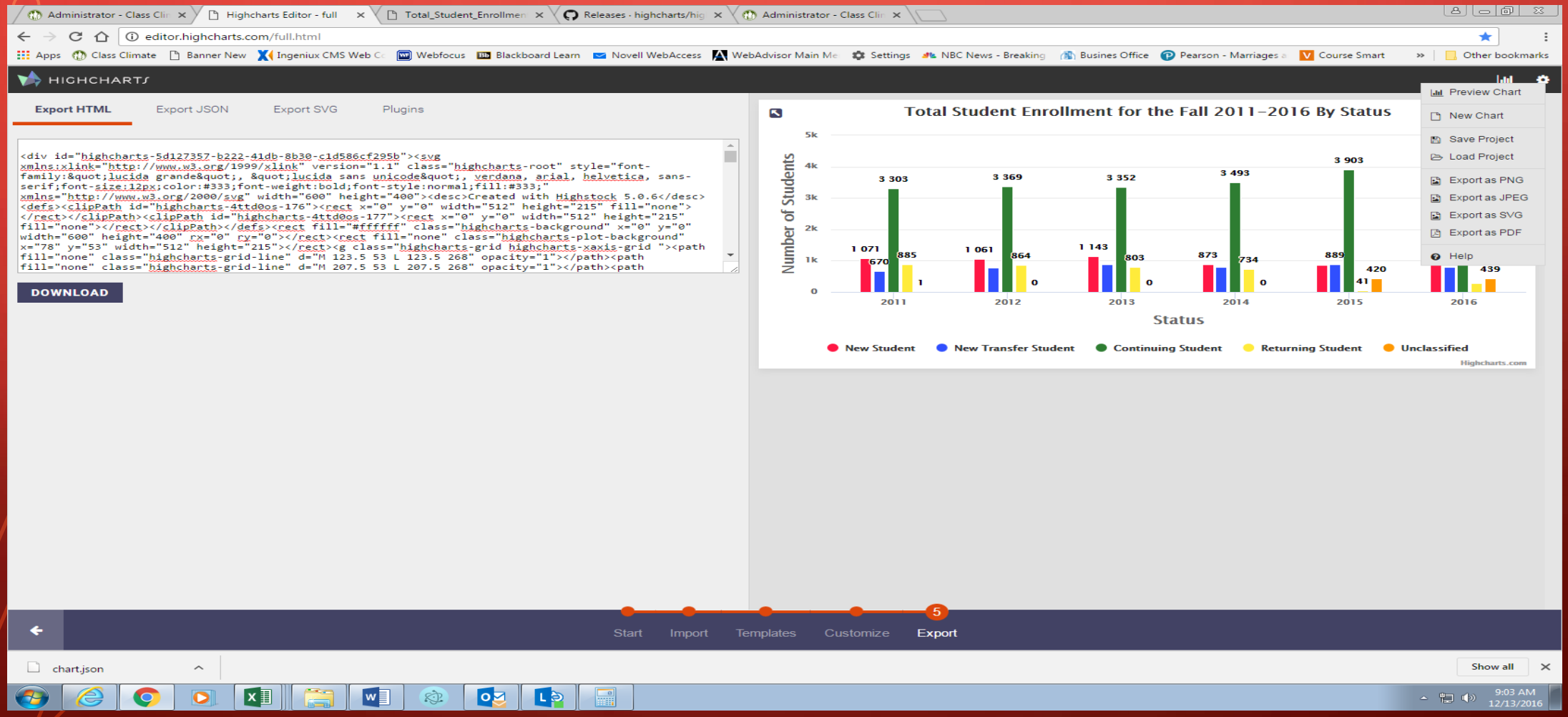
q) Once you have made all your changes in Customize, click on Export at the bottom of the screen. You can download the html version or cut and paste this html code into another program such as Ingeniux for view on a webpage.

PROCEDURES (CONT.)



PROCEDURES (CONT.)

r) You can also preview your chart, save the project, create a new chart, etc. by clicking on the setting button in the upper right-hand part of the screen.

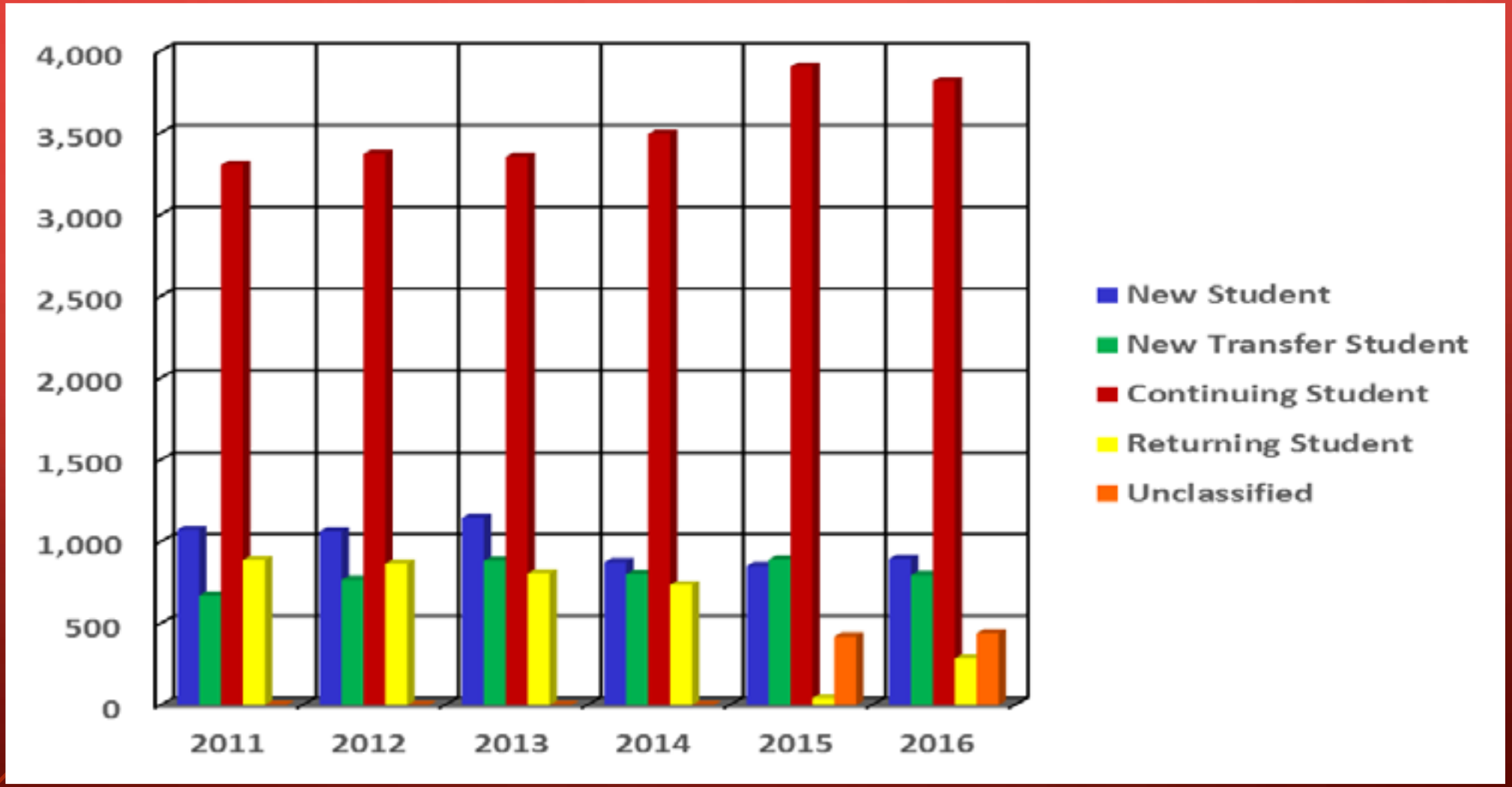


PROCEDURES (CONT.)

- Creating Stacked charts follows similar procedures with column charts listed earlier.

PROCEDURES (CONT.)

- Non-interactive or Ordinary chart



SUMMARY

- Interactive charts such as Highcharts are more interesting than ordinary charts because interactive charts are more pleasant and manipulative. Therefore, they are more eye-catching and informative.

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&
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