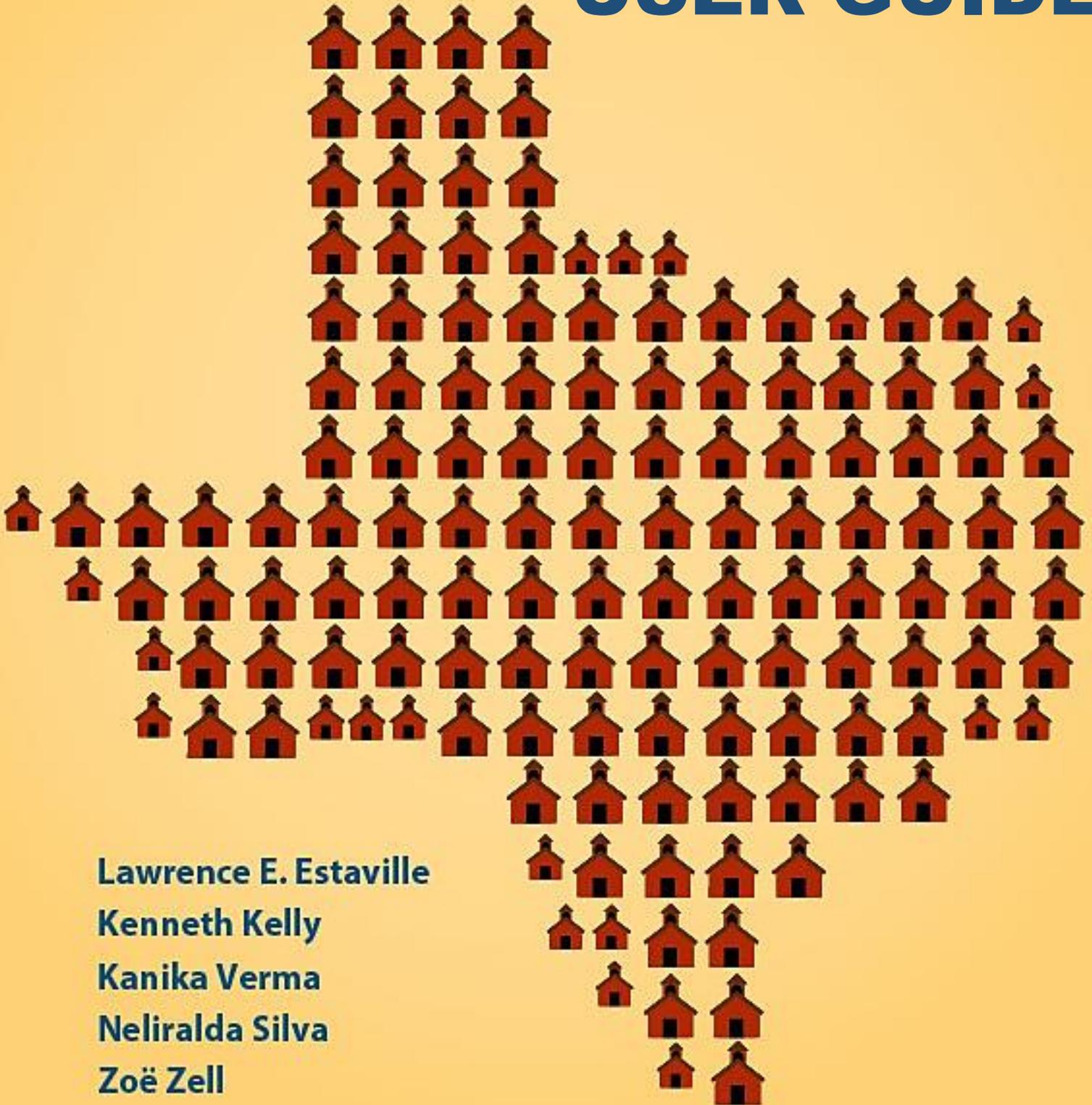


TEXAS EDUCATION atlas

USER GUIDE



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TABLE OF CONTENTS

- About.....1
- Quick Start.....2
- Features and options.....3
 - Thematic Map.....3
 - Indicators Panel.....5
 - Graph Panel.....6
 - Options Panel.....7
 - Data-table Panel.....8
 - Selection Panel.....8
 - Time Slider.....9
 - Interface Options.....9

ABOUT

The Texas Atlas Project developed the interactive *Texas Education Atlas* through StatPlanet Plus,* a Web-based map visualization software. Through its user-friendly interface, the atlas allows users to visualize, plot, track through time, and compare geospatially selected variables regarding all 1,247 Texas school districts and a 127 public and private institutions of higher learning. The atlas provides detailed information for 539 indicators that encompass academic, demographic, and financial variables.

The goal of the *Texas Education Atlas* is to promote evidence-based decision making by improving and simplifying the communication and interpretation of information through: (1) interactive visualizations, (2) a user friendly interface for non-technical users, and (3) an easily disseminated software system that can enable policymakers, researchers, students, and the general public the ability to explore quickly a myriad of data about education in Texas from kindergarten to university. Users can extract data and create their own custom visualizations.

If you have any questions or comments about the Texas Education Atlas, please contact us at txatlasproject@txstate.edu.

*This user guide is based on [StatPlanet and StatTrends User Guide](#).

QUICK START

Computer requirements

The *Texas Education Atlas* will work with both PC and Mac computers with the latest version of Adobe Flash. The speed of your computer processor and Internet connection will affect the performance of the StatPlanet program.

Program launch time

Depending on network speed, the StatPlanet program takes approximately 5-15 seconds to launch the Texas Education Atlas via Adobe Flash. After the program loads the data and map attributes, the computer screen will go blank for before the Web-based atlas appears.

Basic default settings

Color: sequential blue schema for K-12 maps and red schema for higher education maps

Data ranges (class intervals): quintiles

Time slider: every year

Changing the appearance of the map or screen layout

The map controls are located at the bottom right of the StatPlanet screen. Mouse over them and zoom in and out using the slider or the mouse scroll wheel. To restore the map to its original position, click the button between the zoom in and zoom out buttons. To move the map, click, and drag the map with the mouse to the desired position.

Creating graphs

Select the desired indicators (upper left of main screen) and areas (upper right of main screen) for the graph, then click any one of the chart buttons on the graph panel to view the data in a particular format. Multiple indicators and areas can be selected within their panels to view comparisons. Clicking the Full Screen Graph button enlarges the graph, which allows for the viewing of the data in a table; the data can then be copied into Excel.

Mapping two variables simultaneously

To map two variables simultaneously, StatPlanet uses both hue and proportional symbols. First, Bookmark the indicator to be displayed with proportional symbols by clicking the star in the indicator panel while the variable is highlighted. Then, once the indicator is bookmarked, click the Proportional Symbol Map button (fourth from the left on the bottom-left panel of buttons in StatPlanet). At this time, both the hue and proportional symbols represent the bookmarked variable. To make another indicator visible on the map, simply click the desired indicator in the panel to highlight it. Both indicators will then be shown on the map.

View changes over time

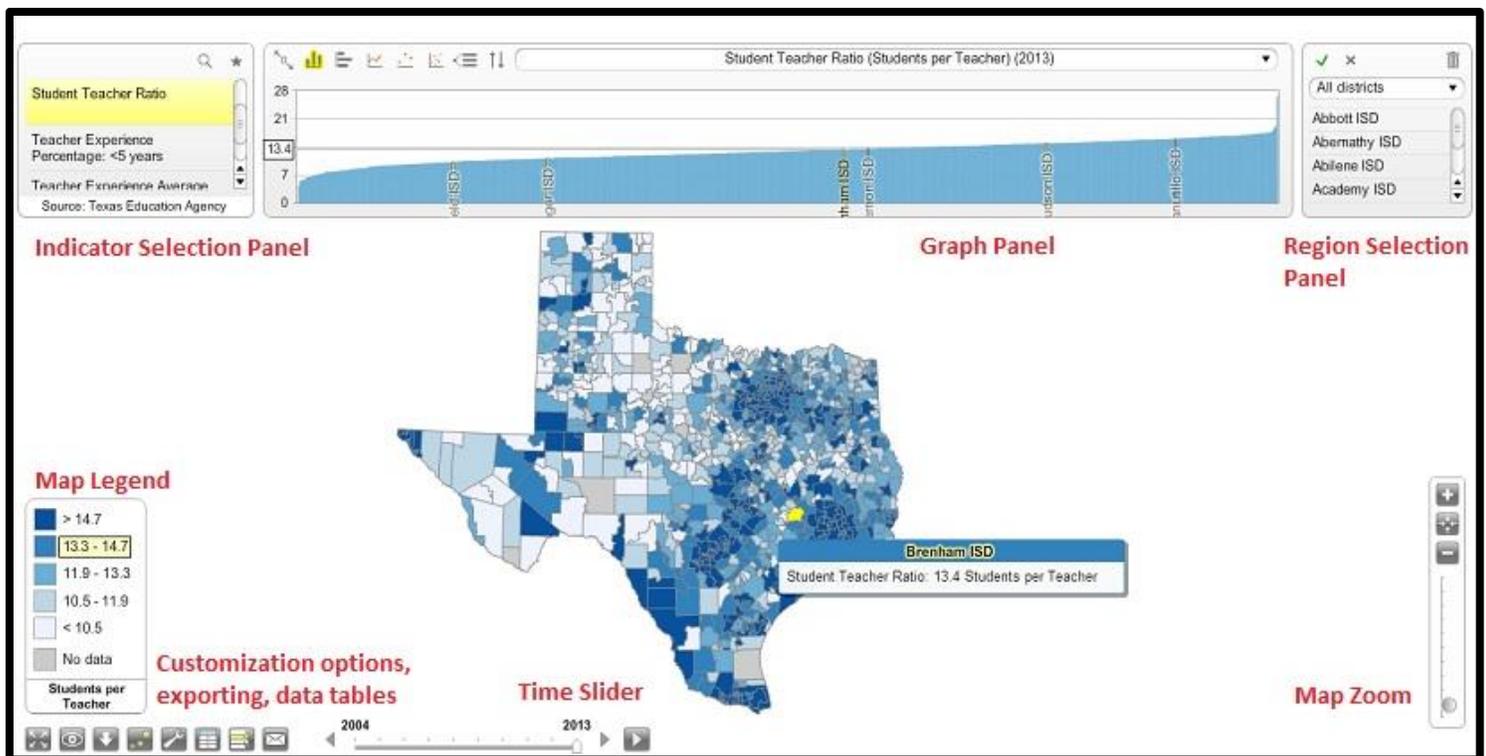
Click on the arrows on either side of the time slider or use the time slider to navigate to the year of interest. Click the Play button next to the time slider to watch the data change over the years through animation.

Save or print a map

Press the Print Screen button on the keyboard, then Paste the image into a program (Paint or MS Word). Crop and edit the image further in these programs. To print a map, right click on the map and select Print.

End of Quick Start.

FEATURES AND OPTIONS



Thematic Map

Choropleth Map



The choropleth map is the main thematic map type in the atlas. The map legend shows which map colors are associated with each data range or class interval (for example, higher values are shaded in increasingly darker colors). Users can customize the displayed map and map legend colors, data ranges (class intervals), and values. Most convey non-numerical information. The default data range (class interval) setting is quintiles.

Proportional Symbol Map



A proportional symbol map scales symbols, usually circles, according to the indicator being mapped. For instance, each symbol could represent a school district. Proportional symbol maps are most suitable with a large range of values instead of a specific value. The symbols can also be used for geographical points or areas.

In StatPlanet the symbol map is overlaid on the choropleth map. Two datasets can therefore be shown on the same map, one for the choropleth map and one for the symbol map.

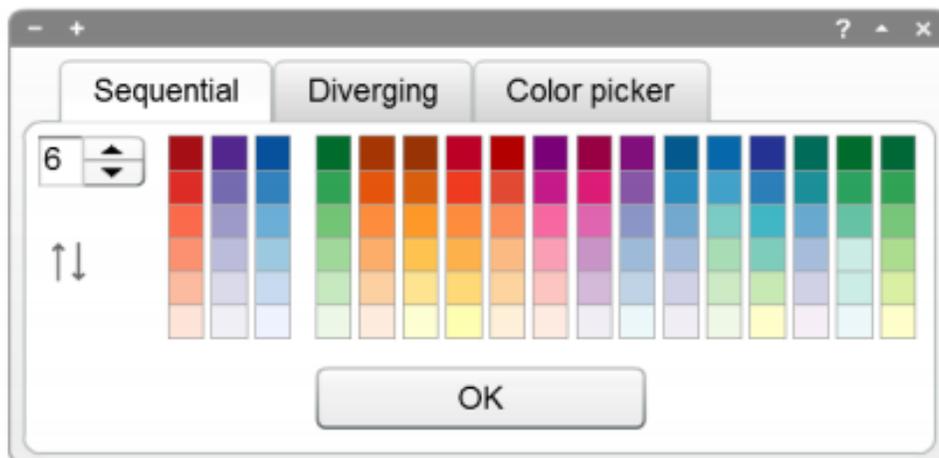
To show the symbol map, click the symbol icon in the bottom-left corner of the screen. The choropleth map represents the data for the selected indicator unless the symbol denotes data bookmarked for the indicator. If the bookmarked indicator is currently selected, both the symbol map and the choropleth map represent the bookmarked indicator. If the proportional symbols are too large for the map, click the Options and Appearance button and adjust the map symbol size under the Map tab.

Selecting a Map Area

- **Mouse over a map area:** Moving the mouse over a map area produces a pop-up containing information about the particular area (e.g. school district) for the selected indicator (as well as the bookmarked indicator, if one exists).
- **Click on a map area:** Clicking on an area (e.g. school district) selects it. See also the Selection panel for additional selection options.

Map Legend

Map colors: Clicking on a color in the legend displays a Color Selection panel. The default color setting is a blue sequential schema. This selection panel allows changing colors (either sequential or diverging color schemes) as well as the number of color classes (3 to 9). The color schemes shown here are from the Color Brewer Website (<http://colorbrewer2.org/>) that is an excellent resource for more information on selecting map colors.



Data range: Clicking on the top or bottom value in the map legend data range (class intervals) enables the adjustment of that specific map data range. The pop-up allows an increase or decrease in the value, or to enter a new value. The program adjusts automatically to 3–9 data ranges. The default data range (class intervals) is quintile.

Using the Data Structure

When mapping an indicator that is **not** ratio data, the user should click the Options and Appearance button and check the “Legend: estimate best value distribution” box under the Map tab. Ratio indicators (% , rates) should be left unchecked in order to visually structure the data in a more effective way. Because the data are discrete samples in time, users should know that interpolations between data points in the Graph panel displays are not accurate, and the lines produced show direction only.

Save or Export



The Save/Export button is located in the bottom-left corner of the screen. This button saves the current map or graph as an image or downloads the data as a CSV file. The Options panel enables changing the image type, size, or quality.

Map Zoom



The map zoom controls are normally hidden from view. Move the mouse toward the bottom right of the screen to make them appear.

- **Zoom:** Use the zoom in and zoom out buttons, drag the zoom slider up or down, or scroll with the mouse wheel.
- **Moving the map:** Click and drag the map with the mouse to move it to a new position.
- **Restore map position:** The button on the left restores the map to the original coordinates for the selected area.

Indicators Panel

Bookmark Indicator



Click the Star button in the Indicators panel to bookmark the selected indicator. The bookmarked indicator remains even when switching to another category. This action allows for (1) creating Scatter Plot graphs, (2) comparing the bookmarked indicator with indicators from other categories, or (3) comparing two indicators through the choropleth map (displaying the selected indicator) and the proportional symbol map (showing the bookmarked indicator).

Graph Panel

Click the Graph button in the bottom-left corner of the screen to open or close the Graph panel.

Bar or Column Chart



The Bar Chart and Column Chart buttons are located in the top-left corner of the Graph panel. Use the Sort button to sort the graph from lowest to highest, highest to lowest, highest to lowest starting in the middle, or alphabetically.



Time Series



The Time Series button is located in the top-left corner of the Graph panel. Use the Selection panel to add map areas or other variables (depending on the data set) to the Time Series Graph. Click on the button again to remove the time series. Map areas can also be selected directly from the map (see also Selection panel).

Use the Sort button to sort the time series labels.

Vertical Bubble Chart



This button displays mapped data as with the column chart but with the values on the y-axis marked as bubbles rather than at the top of a column. This utility allows a second indicator to be visualized in the form of the bubble size. The bubble size formula is: $\text{value}/\text{maximum value}$.

Scatter Plot (bubble chart)



The Scatter Plot button is located in the top-left corner of the Graph panel. Clicking on the button automatically uses the selected indicator as the x-axis variable. A selected second indicator becomes the y-axis variable. The x-axis and y-axis variables are selected in the Graph panel (see below).

Press the Play button to see an animation of data changes over time, with each bubble (point) moving to the corresponding x and y positions (depending on whether data are available for each time interval). Show Trails, which is next to the Play button, causes each bubble to leave a track to mark previous positions over time.

Clicking on a Scatter Plot bubble displays the associated label. A bubble can also be repositioned through drag and drop or by right-clicking and selecting “move text labels or map points.” A third indicator can be visualized through the bubble size parameter. This indicator can be selected through the drop-down above the scatter plot. The bubble size formula is: $\text{value}/\text{maximum value}$.

Selecting X-axis or Y-axis Indicator



To select an x-axis or y-axis indicator, click on the label and then select an indicator from the drop-down menu. Use the drop-down menu in the top of the Graph panel to change

the scale of the bubbles according to a selected indicator.

Search



The search function launches a pop-up that enables a filtering of the list of indicators to find the one needed.

Adjust Graph Size



To change the graph size, move the mouse to the sides or corners of the Graph panel until the cursor changes to look like the one shown on the left. Click and hold down the left Mouse button, drag the panel to the desired size, and release the Mouse button.

Adjust Graph Scale

To adjust the graph scale, click on the top or bottom graph values. The value can then be edited in the pop-up window.

Options Panel



Click the Options button in the bottom-left corner of the screen to open the Options panel.

Map:

- Map colors: map background, map borders, map text color, text outline color, etc.
- Map text size
- Map symbol size (proportional symbol map symbols)
- Map legend: estimate best value distribution; adjust the values so a more equal distribution of areas is represented for each color class, thereby displaying a better distribution of colors. If the map legend option is switched off, the value range for each color class is set at equal intervals based on the highest and lowest value in the data range.
- Map legend: show maximum and minimum values
- Map legend colors

Graph or Chart:

- Graph colors: background, bar and scatter points, scatter point borders
- Graph text size
- Transparency level of graph area (bars/bubbles)
- Size of bubbles (scatter plot graph)
- Bullet graph

General options:

- Animation duration
- Decimal places shown

- Adjust the map or graph scale: StatPlanet automatically adjusts the map and graph scale to fit the dataset. The default setting adjusts the scale when changing the indicator or area but not the year. Users can override the automatic updating of the map/graph scale through (1) changing indicator, (2) changing area, (3) changing year.

Save or export map or graph:

- Set the image type: PNG or JPEG
- Change the image size as a percent of original
- Change the image quality (JPEG images only)

Data-table Panel



Click the Table button in the bottom-left corner of the screen to obtain a data table of the selected indicator. If an indicator has been bookmarked, the data for both the bookmarked and selected indicator are displayed.

Save or Export Table



Save the table as a CSV file that can be opened by most spreadsheets, such as Excel. Users can then analyze the data with statistical programs. The save Table button is located in the top-right corner of the Table panel.

Selection Panel

Mapped areas and variables can be selected in various ways. An efficient way of finding and selecting a mapped area or variable is through the Selection panel, as explained below. A mapped area or variable can also be selected by clicking on it in the map, in the Data Table panel, or in the Graph panel. In each case, the area and variable are highlighted in all three StatPlanet components.

Click on an area in the list to select it. Clicking on a selected item then deselects it. Type the first one or two letters of an item in the list to jump to that item. For example, if the list is school districts, press the letter B to jump to districts starting with B.



If the Selection panel is hidden, click the Select button in the bottom-left corner of the screen to make it appear.

Select Areas



Use the drop-down menu in the top of the Indicators panel to select and zoom into a different area, such as the Texas Panhandle. Users can combine mapped areas to define a custom region (see Selection panel).

For example, the *Texas Education Atlas* has defined a custom school district area for the Texas Panhandle (62 districts). Custom areas enable the user to easily view and understand data in specific and frequently referenced locales.



Select Button

Press the Select button to reduce the size of a list to your selection. Any items that are not selected are removed from view.



Deselect All Button

Press the Deselect All button to clear your selection.



Refresh Button

The Refresh button appears after creating a custom area or group of items. The Refresh button can be used to return to the original list.



Remove Button

To remove items from a list, select those to be removed and press the Remove button.

Time Slider



Use the white slider pointer or click on the Arrow buttons to change the year. Click on the Play button to show changes over time as an animation, starting from the beginning data year. The animation speed can be set in the Options panel. The default setting shows data for every year.

Interface Options

View Panel



Mouse over the View button in the bottom-left of the screen to see various options for showing or hiding map and graph elements and other StatPlanet components.

- Show or hide map area names on the map or graph
- Show or hide map area data on the map
- Show or hide the map pop-up and its components—bar chart, indicator, data
- Show or hide various panels

Shrink or Enlarge



The buttons in the top-left corner of panels, as well as the legend, can be used to shrink or enlarge these sections. This tool may be useful for space management when several panels are open at the same time or to focus in on certain areas.



Help, Minimize, or Close

The buttons in the top-right corner of the screen are the Help, Minimize, and Close buttons.



Adjust Graph Panel Size

Drag and drop the Graph panel borders to adjust the size.



Full Screen

Click on this button in the bottom-left of the screen to either switch to full-screen mode or return to normal panel mode.

Multiple Map Layers

Multiple map layers allow users to view shapefile map layers on top of the main interactive map layer, in this case, point features of various universities in Texas. The additional map layers are static maps unlike the main interactive map layer.

Indicators and data displayed in the maps

The Texas Education Agency (TEA) and the Integrated Postsecondary Education Data System (IPEDS) Websites provided the data for the *Texas Education Atlas*. For more information or inquiries about the data, please email txatlasproject@txstate.edu.