Dean’s Dashboard Walkthrough

Draft: 20 April 2015

Goal and Objectives of the Guided Tour

GOAL:

- The tour will acquaint you with the purpose of the software and how it can be used to develop and update data visualization objects for information-based decision making.

OBJECTIVES:

This presentation will cover:

- The navigation structure, features, and functions of the system
- Developing data to inform a key performance indicator
- Entering and editing data into the Dashboard
- Creating a data visualization object (a graph)
- Adding the graph to the Dashboard
- The people, training, and resources needed to make optimal use of the system

Purpose of the System

- The Dean's Dashboard system can use aggregated data from other management information systems used by the school and display that data in visual charts and graphs. The visual charts and graphs allow the school's management to easily monitor progress and trends in information that is strategic for the successful operations of the school.
- Data can be added from systems such as: finance and accounting, facilities management, student information management, student records, learning management, student assessment, human resources management, alumni management, or any type of enterprise resource planning (ERP) system.
- It contains all the charts and graphs that the school is using to monitor progress in a number of key performance areas organized by category, such as
    - Equipment and Materials
    - External Relations
    - Finance
    - Infrastructure
    - Personnel
    - Students

DHIS2 Languages

Arabic
Arabic (Iraq)
Arabic (Sudan)
Bengali
Bislama
Burmese
Chinese
Dzongkha
English
French
Indonesian
Khmer
Kinyarwanda
Lao
Nepali
Portuguese
Portuguese (Brazil)
Russian
Spanish
Tajik
Vietnamese

General Dashboard Uses

Dashboard users can

- Create a user profile with information on the person and institution
- Send feedback to the Dashboard software developers
- Text search for components created in the Dashboard

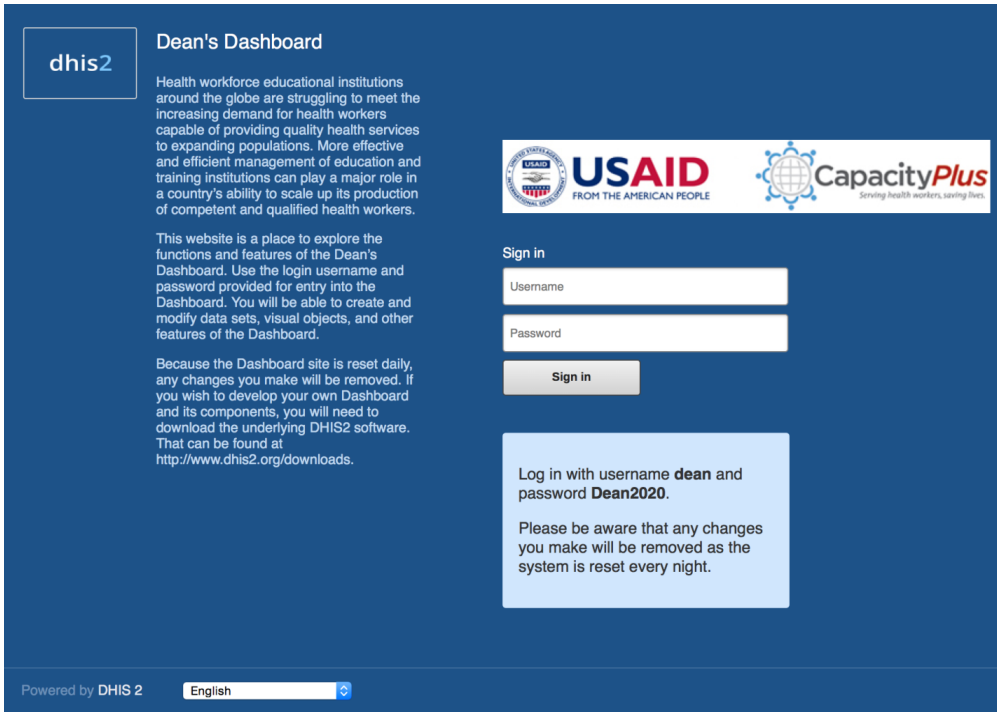
The Dashboard contains many functions beyond this overview

- These include:
  - Generating and sharing pivot tables
  - Data visualization
  - Mapping using a built-in GIS (Geographical Information System) software
  - Generating data reports

System users and technical support

- The Institutional leadership ideally should appoint an implementation team, comprised of
  - A project manager – ***overall manager who should be familiar with all aspects of the Dashboard and will have unlimited access to administer the system***
  - A representative of the institution administration, and
  - A representative from each of the educational programs offered in the institution. ***Source of data and consumers of the product***
- Several resources exist to support dashboard users
  - Step by step user's manual at http://dhis2.github.io/DeansDashboardDocs/en/Deans-Dashboard-Users-Manual_DRAFT_27March2015.pdf
  - Expert community support group at http://www.dhis2.org/expert-community
  - Training available at https://www.dhis2.org/academy

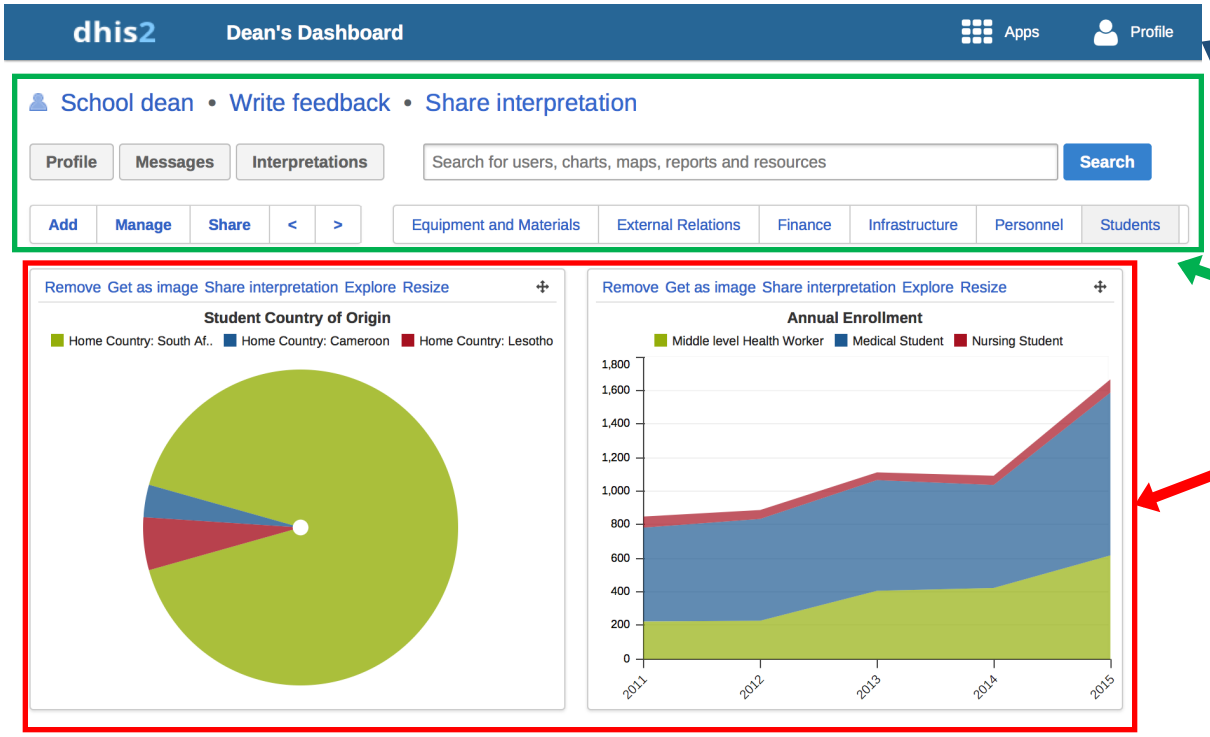
Getting Started



How to log in

- Using the following URL in your web browser to access the Dashboard: https://apps.dhis2.org/edu
- When you are prompted for your username and password, enter “dean” for the username and “Dean2020” for the password
- The main webpage of the Dashboard will then appear

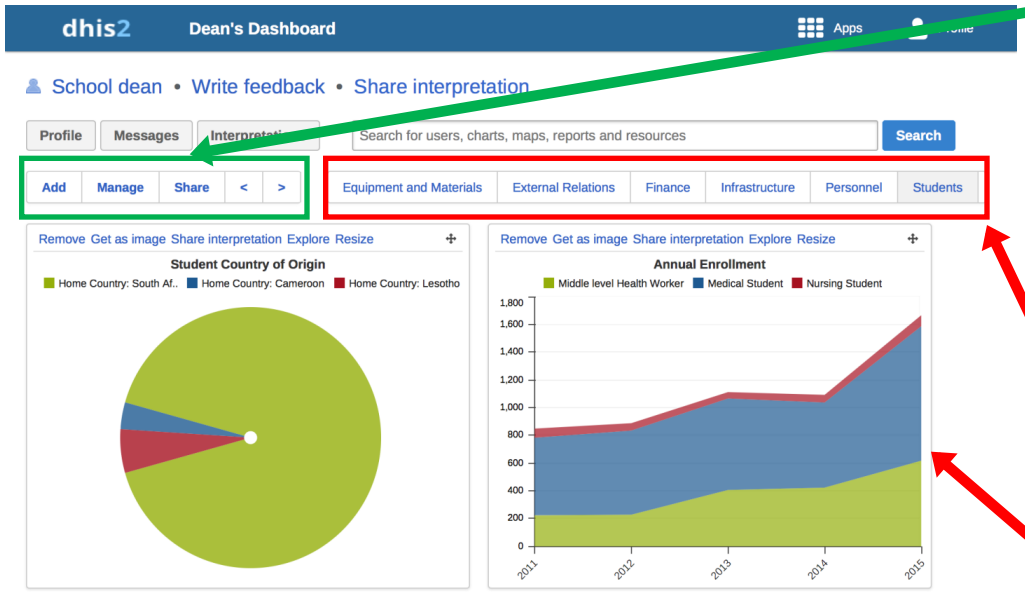
Components of the Main Screen



These are the main areas of the Dashboard

- Header with the Dashboard's name and icons for Apps and Profiles
- General Dashboard management buttons
- Data visualizations shown based on selection from the management buttons

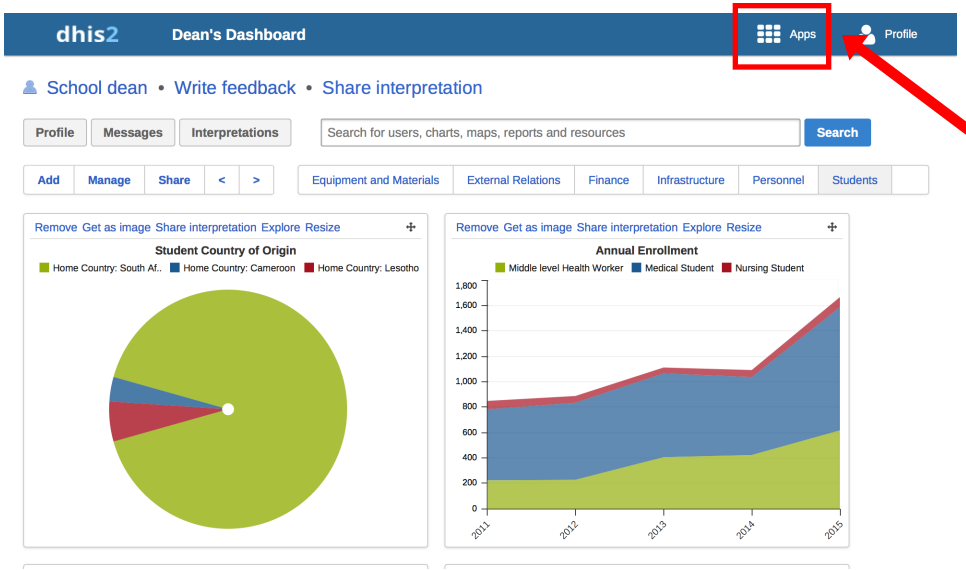
Components of the Main Screen (cont.)



- Add, Manage, Share, <,> Buttons
  - **Add** a new dashboard (Current ones are listed to the right of these buttons)
  - **Manage** the currently selected dashboard
  - **Share** opens a window to share access to the current dashboard
  - **<** and **>** navigate to different dashboard sets listed to the right of these buttons
- Dashboard sets are listed to the right of the navigation buttons; pressing any of them opens the dashboard relating to that topic. Pressing the category buttons reveals example charts for each key performance area, and permits the exploration of the types of information systems that were the source of data for the charts
- Data objects reside within each dashboard and may contain any number of charts, graphs, tables, and maps—all visualizing data entered or imported into the system

The standard dashboard was designed to monitor the programs at a National University, Faculty of Health Sciences

Navigation: Click on Apps

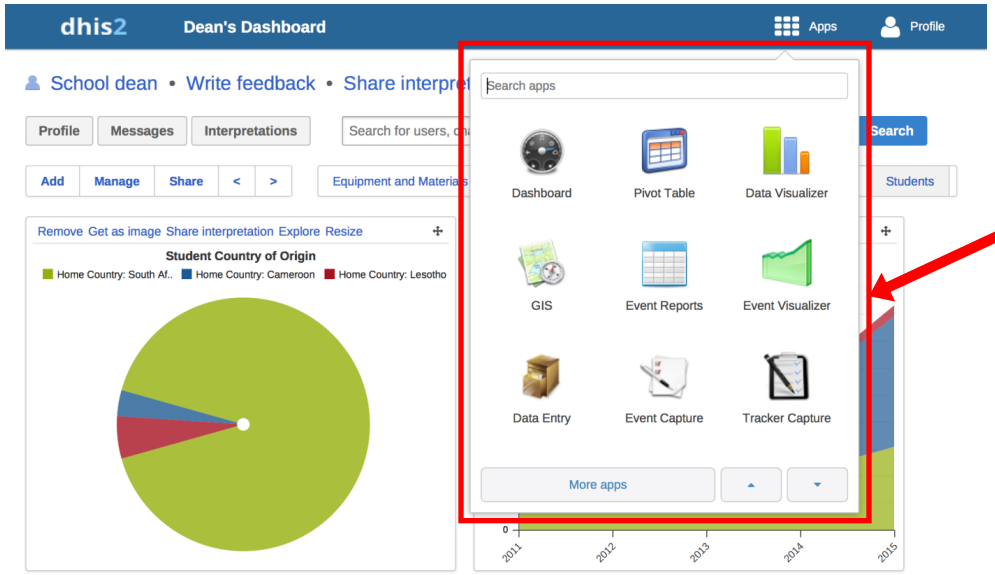


A number of steps are required to develop visual charts and graphs, keep them up-to-date, and adapt them to the changing needs of a school

- Choose the "App" menu found in the upper right of the main dashboard screen. That will bring down a menu of internal apps.

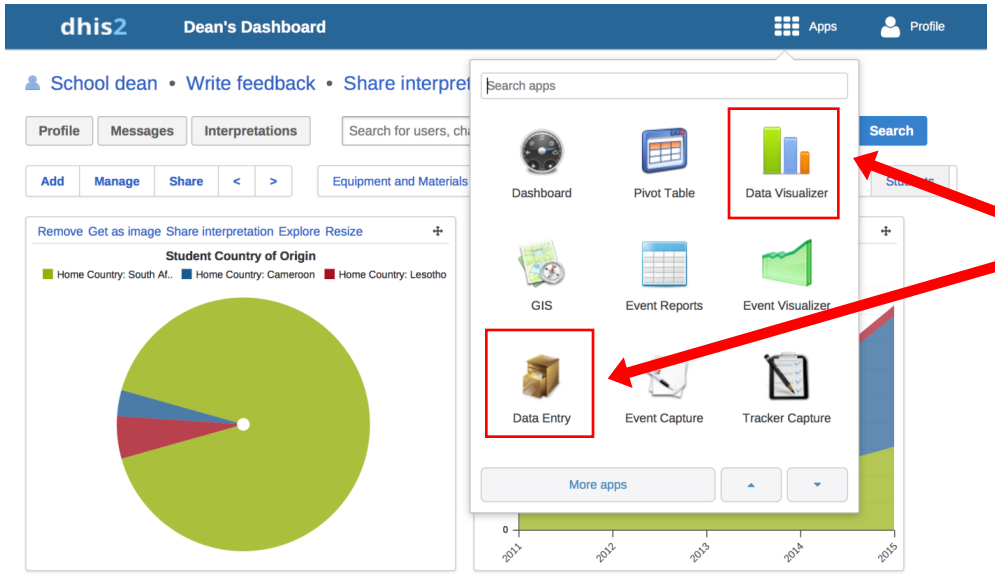
While it's titled "Apps", it should not be confused with the Apps you download for your smartphone or tablet. Apps in this context refer to the applications that are used within the Dean's Dashboard system to develop, maintain, and update visual objects.

Navigation: Apps Dropdown Menu



- Clicking on the Apps menu opens a number of functional components. These include apps to create and edit a dashboard, create and edit pivot tables, and visualize data, among many other functions.

Navigation: Data Visualization



- Our tour will focus on the "Data Visualization" and "Data Entry" apps that are used to set up data structures and enter data to create charts and graphs.

First, it we need to put the data and its visualization in the context of National University Faculty of Health Sciences.

Creating a data visualization object (e.g. a chart or graph)

In this section of the tour, we will walk you through the steps of:

- Identifying which data objects, such as charts and graphs, to create in the system and the sources of data for those objects
- Collecting the data required
- Entering the data
- Selecting the types of data objects for visualization
- Assigning objects to a key performance area on the main dashboard
- Updating or changing the object in response to a school's changing needs

We will use the examples of enrolment and graduation headcounts to illustrate these steps

Example: Development of the Enrolment Dashboard Graphs

- Step 1: Meeting of the National University Faculty of Health Sciences Dean's dashboard committee.
  - Objective: To develop dashboard items.
  - Decision: Use the dashboard to monitor the implementation of the faculty's strategic plan
- Step 2: Review the strategic plan and identify which key performance areas to start with:
  - Major Goal Identified: Scaling up the production of health professionals
  - Example Key Performance Area: Graduation rates across various programs

Step 3: Identification of indicators to track in a key performance area

- Annual *enrolment headcounts* for the undergraduate and postgraduate courses in Nursing, Medicine and Surgery, Medical Sciences, Medical Clinical Practice, and Science in Health Promotion.
- Annual *graduation headcounts* for the undergraduate and postgraduate courses in Nursing, Medicine and Surgery, Medical Sciences, Medical Clinical Practice, and Science in Health Promotion.

Step 4: Identify the sources of the required data:

- The undergraduate enrolment data was obtainable from the University Bureau of Planning and Institutional research. It was also obtainable from the heads of the schools of medicine, nursing, and allied health sciences.
- The postgraduate enrolment data was obtainable from the heads of the programs carrying out postgraduate training – Biochemistry, Physiology, Microbiology, Chemical Pathology, and Nursing.
- The enrolment data for the clinical registrar (residency) training was obtainable from the postgraduate office and from the coordinators of registrar training in district hospitals.
- The annual graduation data was obtainable from the University examinations office. The data was also obtainable from the office of the administrator of the Faculty of Health Sciences

Step 5: Collect the required data

Task specific persons to collect the required data (over a 4 week period) from the identified sources:

- University Bureau of Planning and Institutional Research
- University Examinations office
- Heads of Schools in the Faculty
- Heads of Departments in the Faculty
- Coordinators of Clinical Registrar Training at the Training Hospitals
- Office of the Administrator of the Faculty of Health Sciences

Step 6: Collected Data

The dashboard project manager collated all the data collected. With the help of two task members, they tabulated the data, and then aggregated them into overall annual enrolment and graduation headcounts for the years 2011, 2012, 2013, 2014 and 2015.

Table 1. Enrolment by Degree Program

	Years				
Program	**2011**	**2012**	**2013**	**2014**	**2015**
Nursing	263	253	265	234	230
Medicine and Surgery	520	520	545	534	603
Medical Sciences	34	50	51	48	52
Medical Clinical Practice	78	84	97	85	108
Science in Health Promotion	197	174	130	92	87

Table 2. Graduates by Degree Program

Program	**2011**	**2012**	**2013**	**2014**	**2015**
Nursing		230	254	215	219
Medicine and Surgery		421	447	491	513
Medical Sciences		49	49	46	50
Medical Clinical Practice		82	95	83	107
Science in Health Promotion		167	124	90	86

Step 7: Final data review

The National University Faculty of Health Science dashboard team reconvened to

- Review the collected primary data
- The aggregated data
- Approve the coding of the aggregated data
- Approve the graphic presentation of the aggregate data.

Step 8: Derived data elements

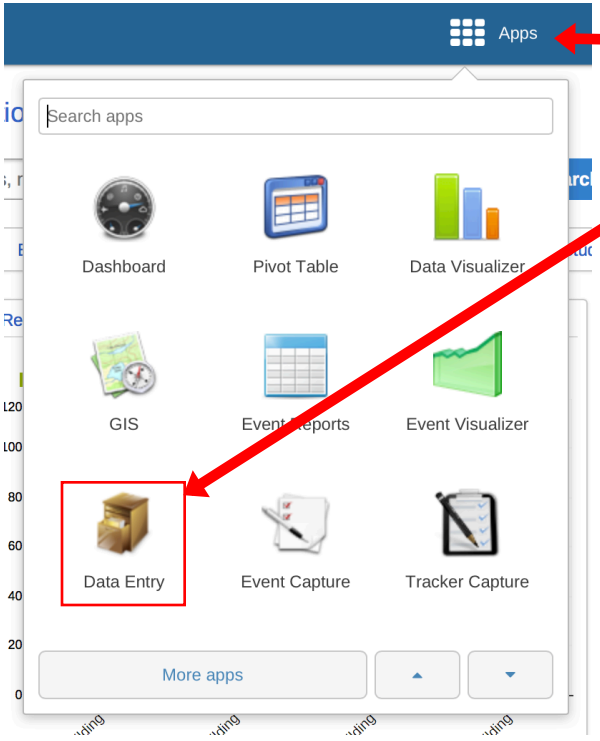
Table 3. Percent Graduating by Year

Percent Graduating	2012	2013	2014	2015
Nursing	91%	96%	92%	95%
Medicine and Surgery	81%	82%	92%	85%
Medical Sciences	98%	96%	96%	96%
Medical Clinical Practice	98%	98%	98%	99%
Science in Health Promotion	96%	95%	98%	99%

Step 9: Data Entry

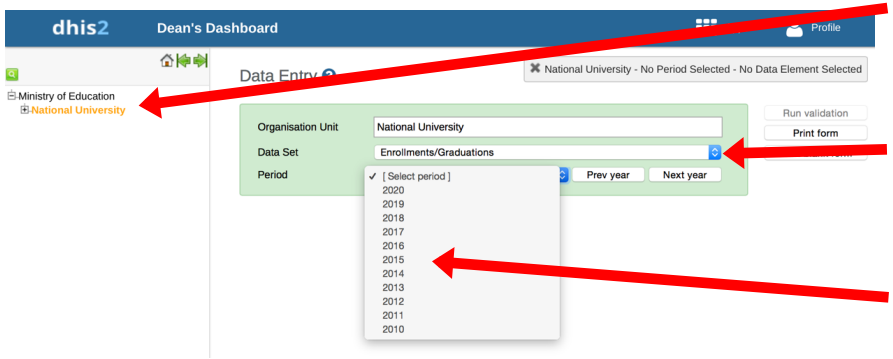
- To get started, login to the Deans Dashboard. Observe that the username and password is case-sensitive!

Data Entry App



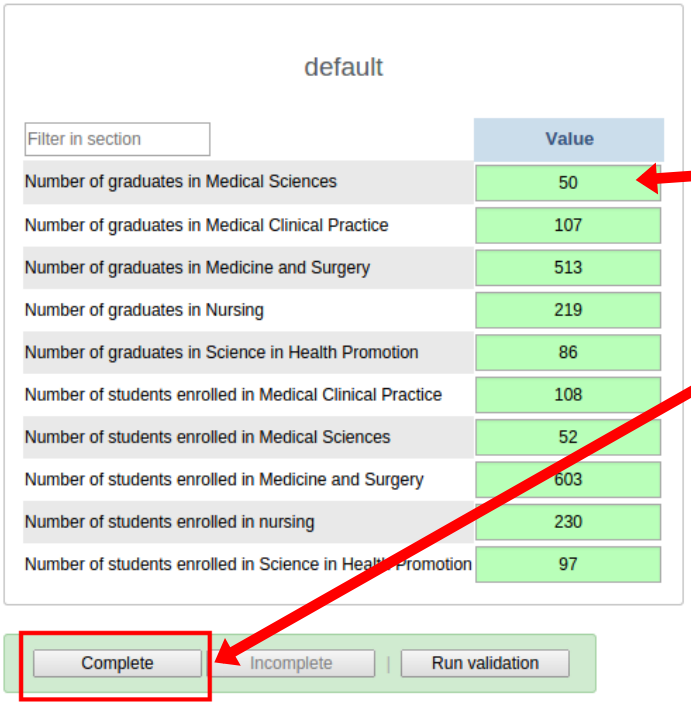
- Click on the Apps menu item
- From the dropdown, select the Data Entry app

Selecting data parameters



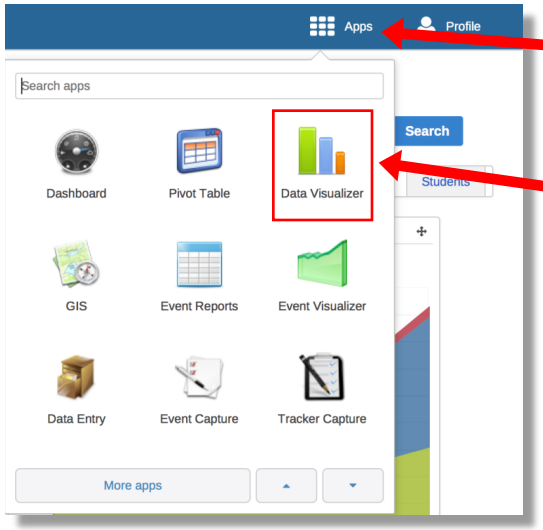
- Select the organization unit from the tree on the left
- Select the data set which you with to enter data for
- Select the time period for which you wish to enter data

Entering Date into Fields; Saving the Record



- Enter the data values into the appropriate fields
- When finished, press “Complete”

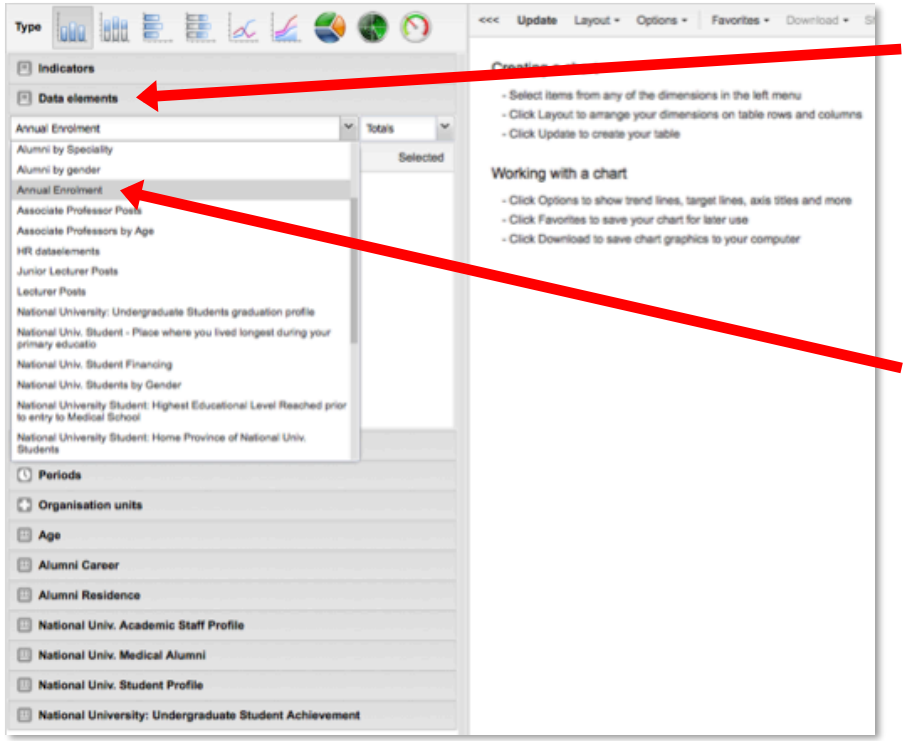
Step 10: Data Visualizer



Once the data is entered, it can be visualized

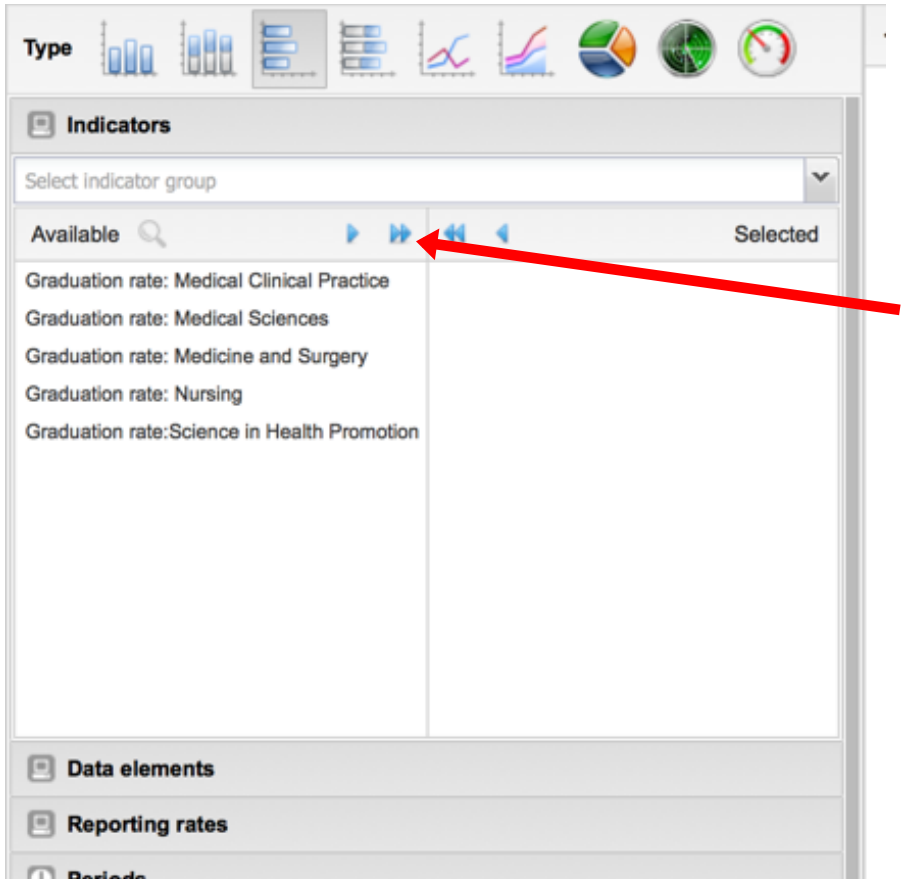
- On the main menu click on the “Apps” menu
- Then click on “Data visualizer”.

Select Data Elements



- Once the data visualizer loads, click on the “Data elements” panel to open it, since we will be making a graph of data elements as opposed to indicators.
- Then select “Annual Enrolments” from the drop-down, which appears in the “Data elements” panel.

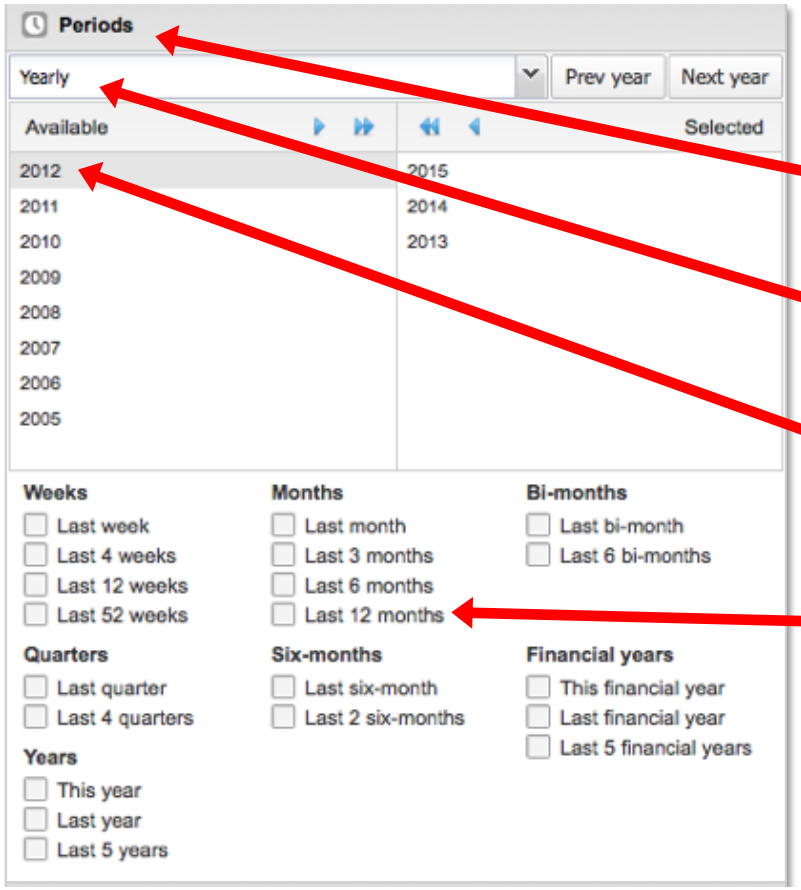
Indicators List



We now see a list of indicators, which belong to the group "Graduation Rate".

- Using the double-arrow, we can move all of these data elements into the "Selected" column.

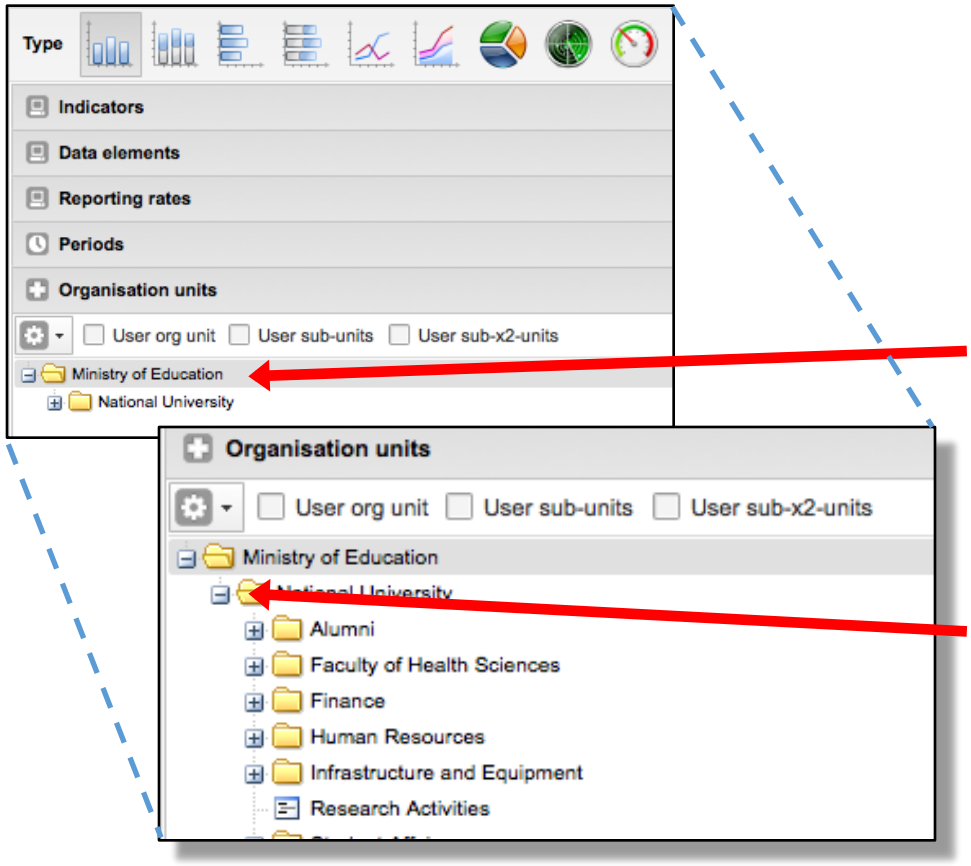
Select Time Period



Select the time period for which we want to visualize the data over.

- Click on the “Periods” panel to open it
- Select “Yearly” from the period type menu
- Double-click each year to move it to the right column
- Be sure to unselect “Last 12 months”

Select Organisational Unit

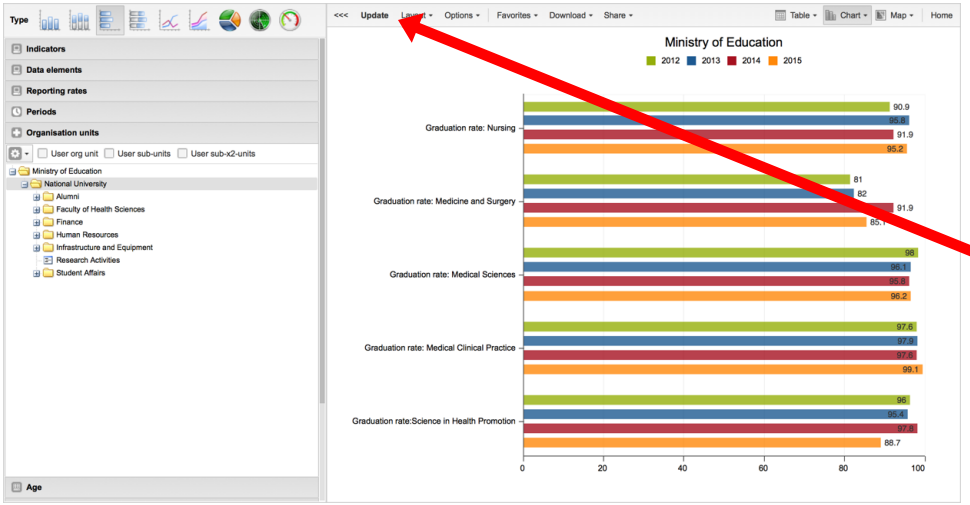


Once the period is selected, then proceed to selecting the organisational unit, in this case "National university".

- Click the "Organisational units" panel, and expand the organisation unit tree by clicking on the "+" icon to the left of "Ministry of Education", then
- Click on the "+" icon next to "National University" to open the dropdown list

Update the graph

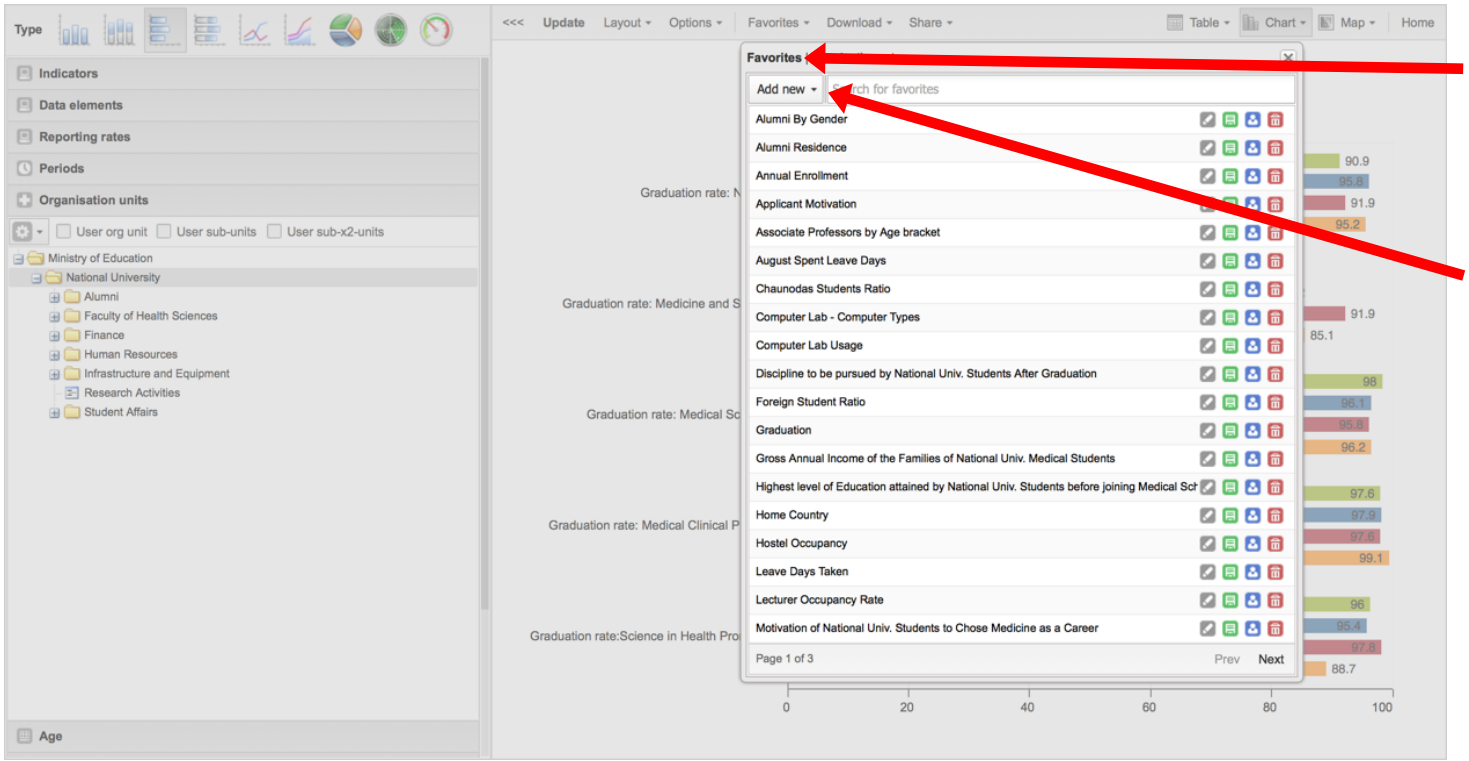
Data Visualizer



- Return to the Data Visualizer app (Home > Apps > Data Visualizator
- At this point, all of the options should be set to generate the graph. Press “Update” causes the graph to be displayed.
- Click “Update” to update the graph

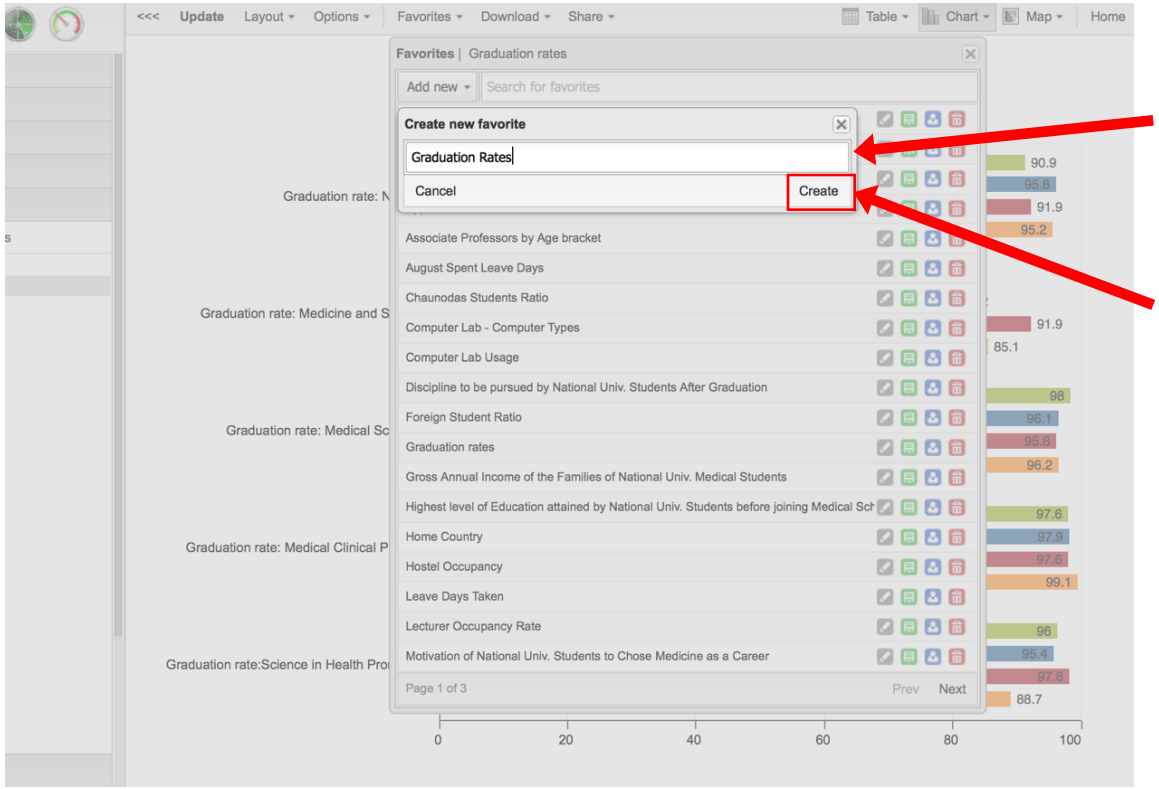
The graph is now created and shows the graduation rates by program for the years selected. Which program is lagging behind the others?

Open Favorites



- Click “Favorites” and then
- Click “Add new”

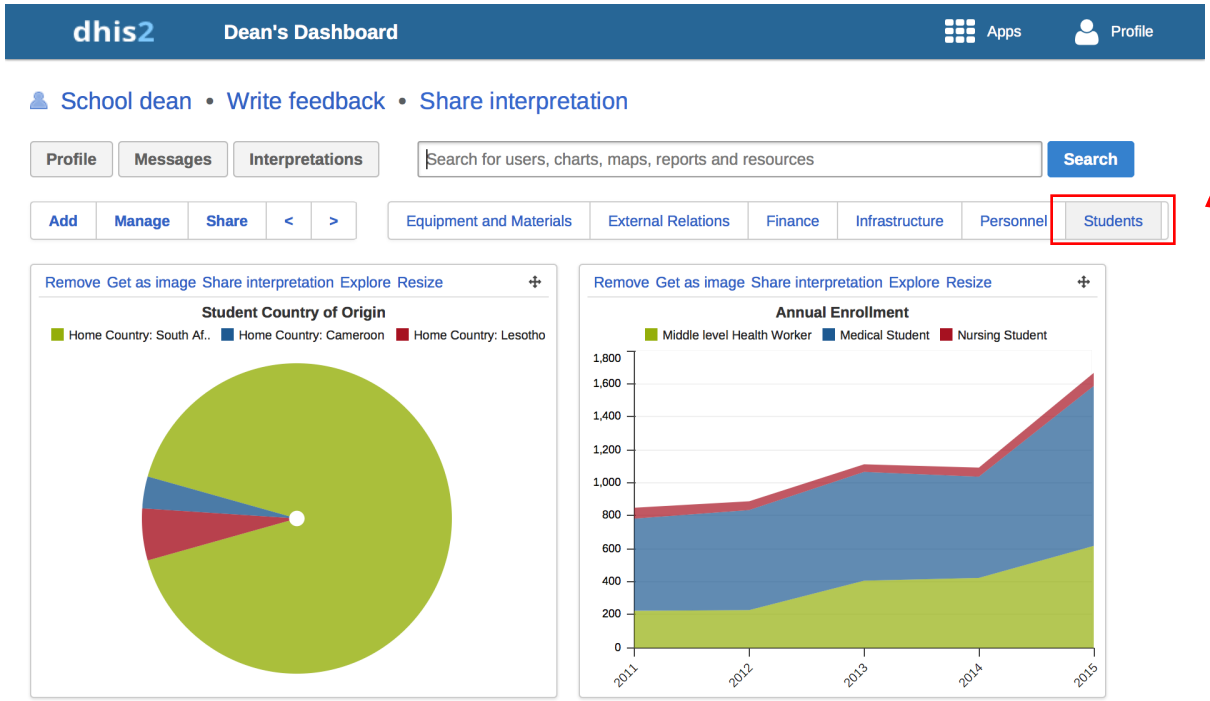
Name the Graph; Create It



- Type the name of the favorite into the dialog box and
- Press “Create” to save the new favorite.
- Press “Home” to return to the main screen

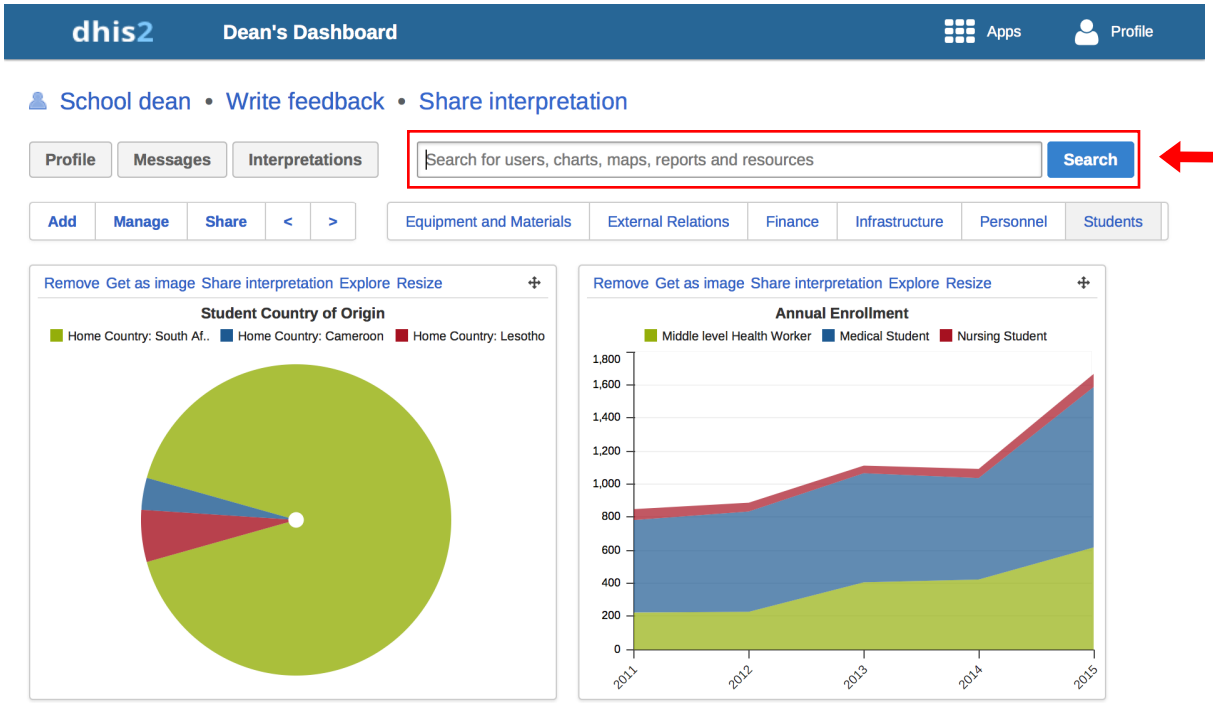
Once the graph is saved as a favorite, it can be added to a dashboard and recalled for later use in the data visualizer.

Add Graph to Favorites



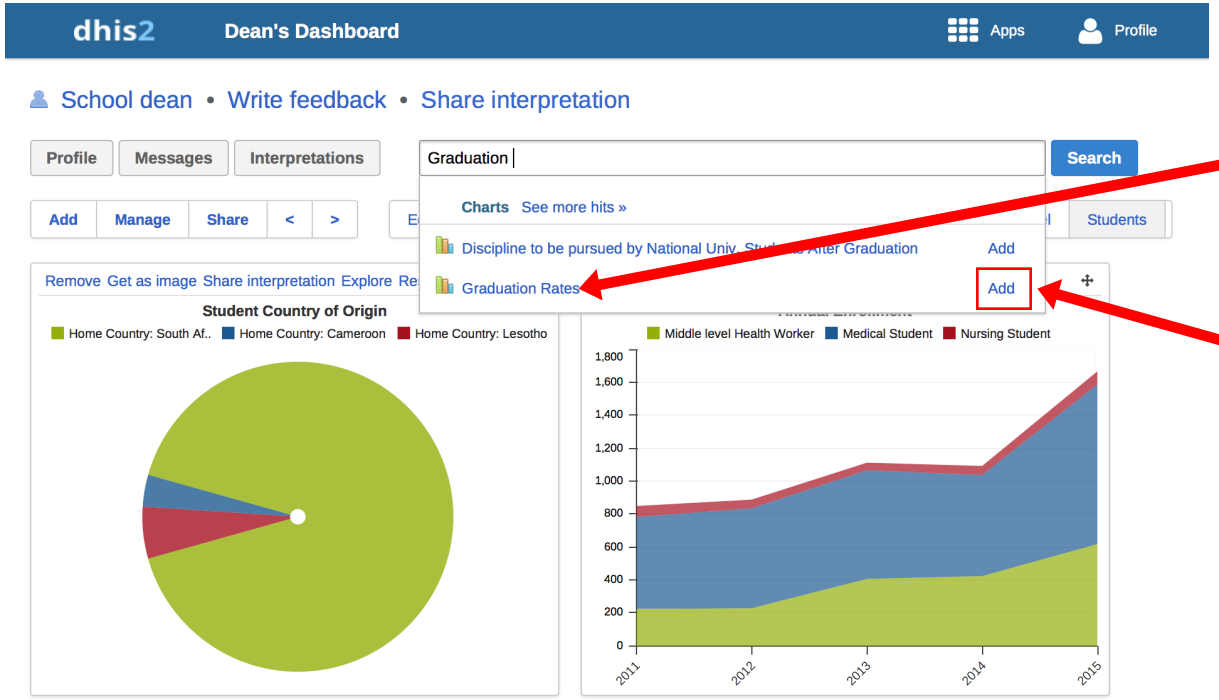
- At the Home screen, select “Students” as the category of information

Add Graph to Favorites



- Type in “Graduation Rates” into the search box

Add Graph to Favorites



- Find “Graduation Rates” in the search box
- Press “Add”

“Graduation Rates” Added