

## USING EXPORTED DATA IN MICROSOFT ACCESS (LAST REVISED: 12/10/2013)

This guide was created to allow agencies to set up the e-Data Tech Support project's Microsoft Access template. The steps below have been adjusted due to the fact that some agencies have upgraded to Microsoft Windows Vista or Windows 7 operating system and/or Microsoft Access 2007/2010.

These procedures are not intended to be an Access Training Resource but to provide information about useful processes in the Access template for analyzing e-Data v2 information. Agencies who plan to customize the Access template should obtain some degree of skill using the Microsoft Access application. Agencies in need of face-to-face database training should contact the regional professional development center.

### **Step One**

Users must first create a folder on their computer's hard drive (C:).

**NOTE:** You may already have a folder created on your hard drive if you used the Access template last program year. If so, you may skip this step, but you may benefit from clearing the contents of this folder to start from scratch this year. Most users rename last year's data folder, using a name such as "data2011-12", and create a new data folder following the steps below.

1. On the desktop or in the start menu, click **My Computer** (This option in Windows Vista/Windows 7 is labeled **Computer**)
2. On the **My Computer (Computer)** window, double-click the (C:) drive.
3. On the (C:) drive screen, select **File->New->Folder** (In Windows Vista/Windows 7, click New Folder in the window toolbar near the top of the window)
4. By default, the folder will be automatically assigned the name "New Folder" and will be highlighted. Type the word **data** and hit the Enter key on your keyboard to rename the folder.

### **Step Two**

Download a copy of the Microsoft Access database template.

1. Open Internet Explorer or Netscape and navigate to the following website at <http://www.ed.psu.edu/isal/AccessTemplate.htm>
2. Click the link named **2013-14 Access Database Template**.
3. When prompted, click **Open**.
4. On the Window that appears, click **Extract All Files** in the Folder Tasks section on the left of the window (Windows XP). In Windows Vista or Windows 7, click **Extract All Files** in the toolbar at the top of the window.
5. In Windows XP, click **Next** on the Welcome screen. **NOTE:** Windows Vista/Windows 7 users will not see a Welcome screen and should skip this step.
6. In the text box, type **C:\data** and click **Next** (Windows XP) or **Extract** (Vista/Windows 7).
7. Click **Finish**. **NOTE:** Windows Vista/Windows 7 users will not be prompted to click Finish.

### **Step Three**

Export data from the e-Data v2 website.

**NOTE:** Data entered into the system is available in the exports as soon as the data is saved. Exports in e-Data are "real-time," but certain calculations are automatically processed overnight by the e-Data v2

system. The calculations include enrollment (Adult Education and Family Literacy) and Educational Gain, but this does not have an effect on the exports. The only aspect of the e-Data v2 system affected by the overnight processes is the display of the Educational Gain goal on the Goals tab of the adult screen. In addition, any adults locked due to a PAsecureID near match will not have a PAsecureID in the Adult export table.

1. Open Internet Explorer or Netscape and navigate to the PDE website at <http://www.education.state.pa.us>
2. Log in to the PDE website.
3. Select **e-Data v2** from the “My PDE Applications” drop-down menu at the bottom of the left navigation bar and click **Go**.
4. Click **Export Data** from the **Maintenance** menu in the top navigation bar.
5. Click your **agency name** and verify that **2013-14** is selected in the Program Year drop-down. If your agency holds direct contracts and has one or more subcontracting agencies listed on the export screen, select **-ALL-** when exporting.
6. Click **Generate Export**
7. When prompted, click **Open**.
8. On the Window that appears click **Extract All Files** in the Folder Tasks section on the left of the window (Windows XP). In Windows Vista/Windows 7, click **Extract All Files** in the toolbar at the top of the window.
9. In Windows XP, click **Next** on the Welcome screen. **NOTE:** Windows Vista/Windows 7 users will not see a Welcome screen and should skip this step.
10. In the text box, type **C:\data** and click **Next** (Windows XP) or **Extract** (Vista/Windows 7).
11. Click **Finish**. **NOTE:** Windows Vista/Windows 7 users will not be prompted to click Finish.

## **Step Four**

Users must change one or more default settings in Microsoft Access prior to updating the database. The directions used in this step are different depending on the version of Microsoft Access installed on the computer.

1. Open the database template file.

**NOTE:** In some cases, users may receive an error message and may not be able to open the template file. If this occurs, right-click the template file and choose **Properties**. On the **General Tab**, click the **Unblock** button at the bottom of the properties dialog box and then click **OK**.

2. Follow the steps below (for your version of Microsoft Access).

### Access 2000/XP/2003

#### **Turn Off Action Query Prompts**

1. Open Microsoft Access
2. Click **Tools** in the menu bar.
3. Click **Options**
4. Click the **Edit/Find** tab
5. **Uncheck** the **Action Queries checkbox** in the Confirm section on the right of the window.
6. Click **OK**.

## Access 2007

### Turn Off Action Query Prompts and Adjust Macro Security (Access 2007):

1. Open Microsoft Access.
2. Click the **Office Button** at the top left. 
3. Click **Access Options** at the bottom of the menu.
4. Click **Advanced** in the menu on the left.
5. **Uncheck** the **Action Queries checkbox** in the Confirm section on the right of the window.
6. Click **Trust Center** in the menu on the left.
7. Click the **Trust Center Settings** button.
8. Click **Macro Settings** in the menu on the left.
9. Select **Enable all macros**.

## Access 2010

### Turn Off Action Query Prompts and Adjust Macro Security (Access 2010):

1. Open Microsoft Access.
2. Click the **File tab** at the top left.
3. Click **Options** at the bottom of the left navigation menu in the Help section.
4. Click **Client Settings** in the menu on the left.
5. **Uncheck** the **Action Queries checkbox** in the Confirm section.
6. Click **Trust Center** in the menu on the left.
7. Click the **Trust Center Settings** button.
8. Click **Macro Settings** in the menu on the left.
9. Select **Enable all macros, Click OK twice and Close Microsoft Access**.

### **Step Five**

The next step is to update the database template.

1. On the desktop or in the start menu, click **My Computer** (This option in Windows Vista/Windows 7 is labeled **Computer**)
2. On the **My Computer (Computer)** window, double-click the (C:) drive.
3. Double-click the **data** folder.
4. Double-click the **e-Data\_Access\_template\_v2\_13-14.mdb** file to open the database if not already open.
5. Click the **“Update Existing and Add New Records”** button.

### **Next Steps**

After completing the five steps, users have successfully updated the database template. If new data has been added in the e-Data v2 system, it is not included in the database template. Users must repeat steps three and five to update the database with new information.

## **Helpful Hint**

In Step Two listed above, users are directed to extract the template file to the C:\data directory. It is not necessary to save the database template file in the c:\data directory. Users may save the database template file in any location, including folders on a shared server. The export process in Step Three is not as flexible. Exports **must** be extracted to the **c:\data** directory.

If multiple users at one agency are interested in using the Access database template, it is possible for one user to download/update the template and save it in a shared location. This will allow multiple users at one agency to access the same template file and will eliminate the need for every person to export data from the e-Data v2 system and update the template individually.

**NOTE:** If this scenario is used by an agency, please note that ALL users must complete step four above.

## **Useful features in Access**

Using the buttons in the 'View Selected Information' section of the Access template will allow users to view the data obtained from e-data v2. Some Access functions that are useful are the following:

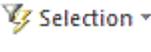
### **Find**

**Access 2000/XP/2003** - Using the Access Toolbar, you can perform a find operation in a selected column by clicking the  button

**Access 2007/2010** - Using the Access Ribbon, you can perform a find operation in a selected column by clicking the  **Find** button

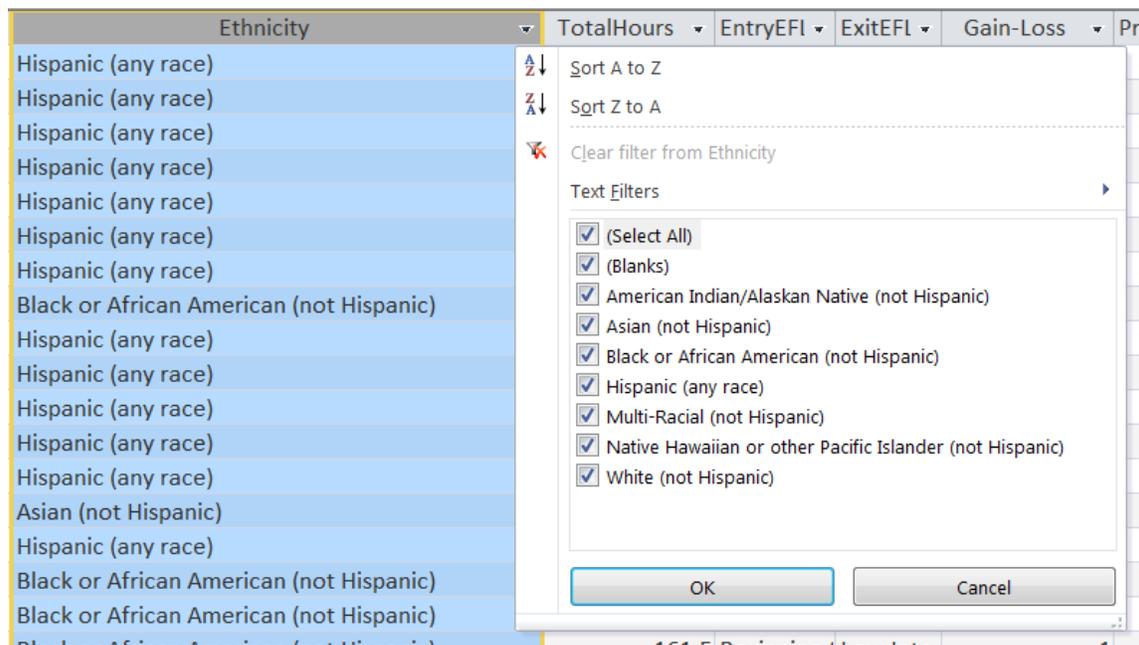
### **Filter**

**Access 2000/XP/2003** - Using the Access Toolbar, you can perform filters on selected information by clicking on the filter by selection  button. Remove the filter by clicking on the remove filter  button.

**Access 2007/2010** - Using the Access Ribbon, you can perform filters on selected information by clicking on the filter by selection  button. Remove the filter by clicking on the remove filter  button.

You may also use the drop-down arrow in the header row to filter by one or more fields. In the screenshot below, the drop-down arrow was clicked for the Ethnicity field. Users have the option to sort ascending or descending here, to use a Text Filter or to select/deselect certain ethnicities to filter. A "Select All" and "Blanks" option is available to see all records or to see only blank records.

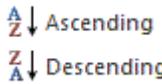
Each field type includes different filter options. For example, it is possible to filter date fields using one specific date, month, year, quarter, date range and many others. Filters on numeric field types allow users to look for values less than, greater than, equal to, between, etc.



## Sort

**Access 2000/XP/2003** - Using the Access Toolbar, you can sort by selected columns in ascending and descending order by clicking the  buttons. After sorting a table/query, when you close the table/query, Access will prompt you to save the changes; say No to return the table/query to its original sort order.

**Access 2007/2010** - Using the Access Ribbon, you can sort by selected columns in ascending and

descending order by clicking the  buttons. After sorting a table/query, when you close the table/query, Access will prompt you to save the changes; say No to return the table/query to its original sort order.

## Create a New Query

To create a customized display of information, including related information, begin by clicking the 'Create New Query' button at the bottom of the 'View Selected Information' section. Then proceed with the following:

1. Select **Design View** from the New Query dialog box, then click **OK**.
2. From the 'Show Table' dialog, scroll toward the bottom and select one or more tables or queries beginning with from which you would like to create a display of information (see the *e-data* relationship index at the end of the System Manual)
3. Click **Add** to add a table or query,
4. Click **Close** to finish.

- From the top pane of the 'Select Query' design window, select the desired fields to add to the query design grid in the bottom pane either by double-clicking or dragging the field to the grid below.
- The Run  button on the toolbar will display the query results. Clicking the Design View  button on the tool bar will return the user to the query design window. In Access 2007/2010, the Run and Design View buttons appear in the Ribbon at the top of the screen.



- The Totals  button on the tool bar allows queries to subtotal and summarize data by grouping like items together. The 'Total' row that will be added to the design grid by clicking this button. In Access 2007/2010, the Totals button appears in the Access Ribbon on the top of the screen.



Closing the main form by clicking the **Close Main Interface** button allows users to view the Access database window. **To maintain the processes already in place, none of the tables starting with the word 'Code', 'Link' or 'Move' should be altered in any way.** The tables starting with 'tbl' can have fields added to them, but none of the existing fields should be changed in any way or the database may cease to function properly.

The existing queries starting with the letters 'qryView' should not be altered to suit individual agency's needs. These queries are linked to the buttons on the Main Interface, such as Adult, Adult Goals, etc. and are also used in many of the reports that appear in the template. None of these queries or any other queries should be deleted or altered in any way or the system may cease to function properly or reports will not show accurate results. Users may adjust the queries but be sure to "Save As.." so that the existing queries remain intact. Additional objects and processes may be created for agency's use and data needs within the database. Agencies are encouraged to share information and processes that will make all external systems better and openly communicate research and achievements in these areas.

**NOTE:** When creating custom reports or queries, it is recommended to use a common naming scheme. For example, agencies may choose to start the name of each query or report with the word "LOCAL." This enables users to easily find custom queries and reports. In addition, queries and reports can be imported from prior year templates into the current year version of the database template. The import process is very simple if all custom queries and reports follow a similar naming scheme.

## Importing Custom queries/reports

Over the course of a program year, the e-Data Tech Support project occasionally updates the database template to include additional reports, queries or data checking items. When a new version of the template is released, users must import and custom queries/reports from the previous version of the template into the new version. In some cases, the version number of the template does not change so make sure that you back up your existing template or rename it so your custom queries/reports are not lost.

To import custom queries/reports from one template to another, follow the steps below:

- In the **External Data** tab, select **Access** from the Import section of the toolbar.
- On the window that appears, click the **Browse** button.

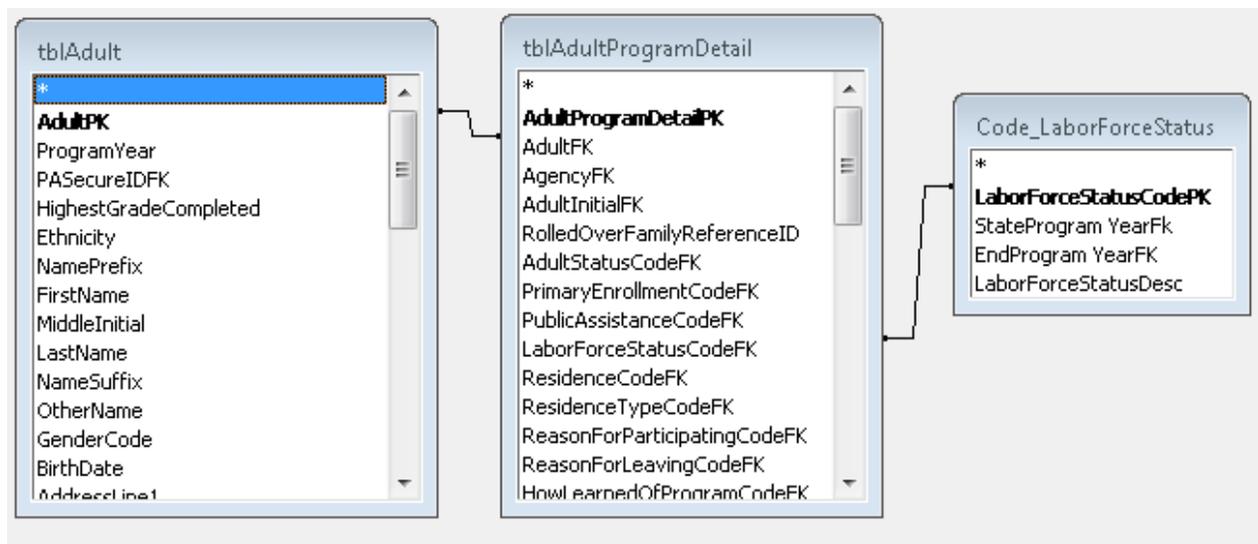
3. Browse to find your previous version of the template that holds your custom queries/reports. Highlight it and click **Open**.
4. Click **OK**.
5. Select the queries/report you want to import by clicking them individually. If you have used the tip above and prefaced all of your custom queries and reports with the phrase “LOCAL\_” they will all be together in the Import Objects list.
6. After selecting all objects to import, click **OK**.

## ***e-Data v2 Table Relationships***

The e-Data v2 system is a relational database. The database uses primary keys (PK) and foreign keys (FK) to link related tables. For example, the field named AdultPK is the unique identifier for adult records and is included in tblAdult. This field can be used to link tblAdult to other fields in the database, such as tblAdultProgramDetail. The field named AdultFK in tblAdultProgramDetail is linked to tblAdult through the field AdultPK.

Understanding the key fields is instrumental in understanding how to link tables/queries when creating queries/reports. The most common relationships are already made in the database and will automatically appear when adding tables to a query.

In this example, the Adult, Adult Program Detail and Labor Force Status Code tables are linked to produce a list of adults by Labor Force Status.

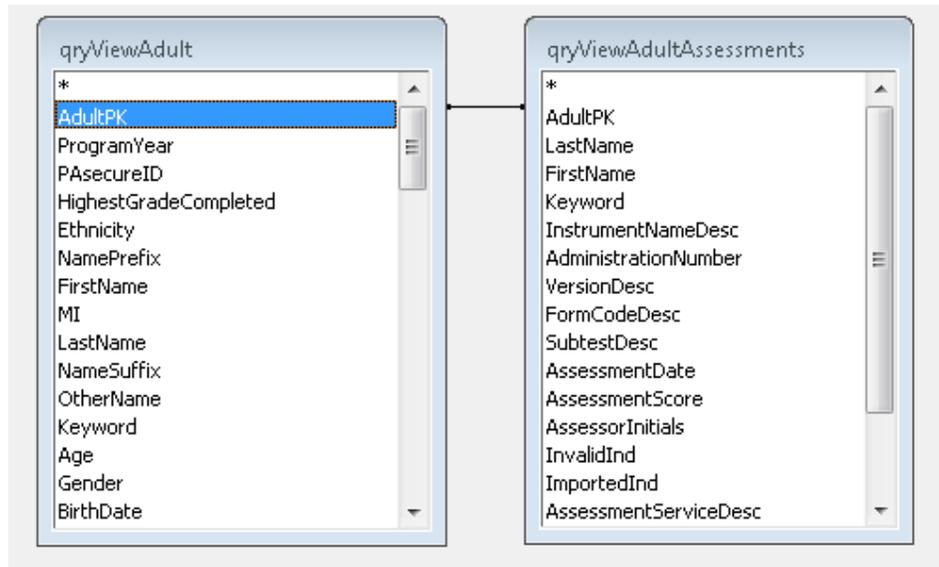


Note the links made between the tables. The fields AdultPK and AdultFK provide the link between the Adult and Adult Program Detail tables. The Adult Program Detail table links to the Code\_LaborForceStatus table using the LaborForceStatusCodePK and LaborForceStatusCodeFK fields.

The Access database template includes 63 “Code” tables similar to the Labor Force Status table above. The code tables allow text values to be displayed instead of numeric codes.

The main page of the Access database template includes buttons that display pre-built queries for the various export tables. It is recommended that these queries be used as the base for any agency custom queries to eliminate the need to link tables to the code tables (these queries all start with “qryView”).

For example, connecting the Adult and Adult Assessments queries eliminates the need to connect multiple code tables, as displayed below.



For additional information, please contact e-Data Tech Support at 1-877-857-8869 or [eDataTechSupport@psu.edu](mailto:eDataTechSupport@psu.edu).