

# Crystal Reports 9.0

## Create a Crystal Report Using the Report Wizard (Lesson 2)

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=Shortcut =Advice =Caution

### Lesson 2

#### Introduction

This report will be created against PeopleSoft tables for currently enrolled, undergraduate students who have a declared major of MCOM or POSC.

If this is your first time using Crystal 9.0, please configure your Setting Options (See Crystal Enterprise 9.0 Set Report Options: <http://wwwnew.towson.edu/adminfinance/OTS/training/techdocs.asp#Crystal>)

#### Process Summary

**Introduction**  
**Create a Report Using the Wizard**

#### Create A Report Using the Report Wizard

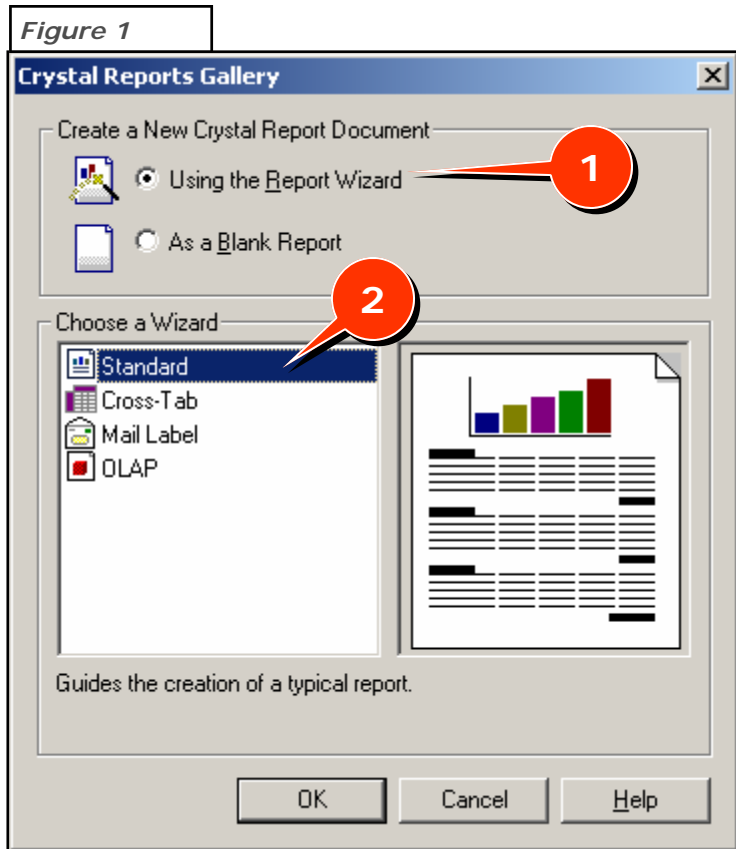
Click File > New

The “Crystal Reports Gallery” window will appear. Be sure “Using the Report Wizard” (Figure 1, 1) is selected.

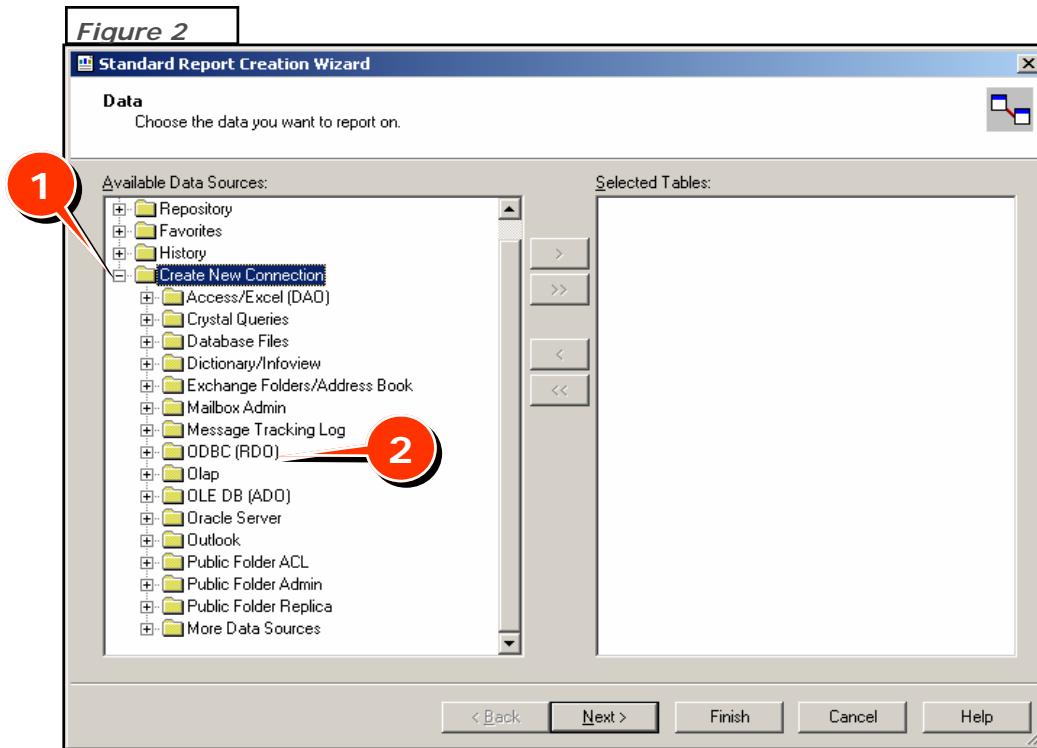
There are different templates you can use: “Standard”, “Cross-Tab”, “Mail Label”, “OLAP”. For the purpose of this class, we will use the “Standard” report option.

Be sure “Standard” (Fig 1, 2) is highlighted and select “OK”.

After you have created reports, you may be able to select “History” to locate the data source for a report. Another option would be “Current Connections” if you have a report open against the same data source. If the data source is not in either one of those areas, select “Create New Connection”. For this report, that is what we will do.



Click on the "+" next to "Create New Connection" (Figure 2, 1). Locate "ODBC (RDO)" (Figure 2, 2). Click the "+" next to or double-click "ODBC (RDO)".

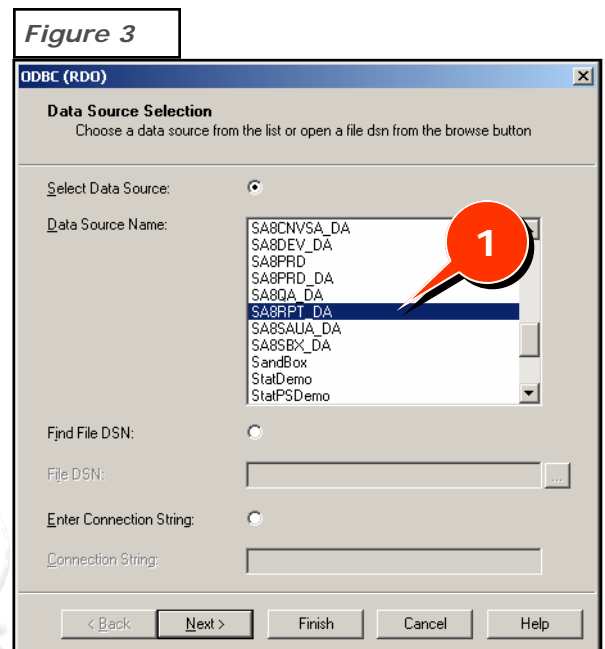


Then select the data source where the tables reside.

Highlight SA8RPT\_DA (Figure 3, 1) and click "Next". You will use this data source for all of your Crystal Reports against the PeopleSoft tables. Other options for other reports, other than PeopleSoft, may include "Access/Excel (DAO)", if you are using an Access database located on your local PC.

**NOTE:** If connecting to an Access database, you will have to change/delete the database options under "File > Options".

*Options may also be changed by right-clicking on the window for "Available Data Sources", and selecting "Options". After the options are set, you will have to right-click again in the window and choose "Refresh". In Crystal 9, I have noticed that the tables do not always refresh; however, you may need to log off the data source and log back in, or exit the program and open it again.*

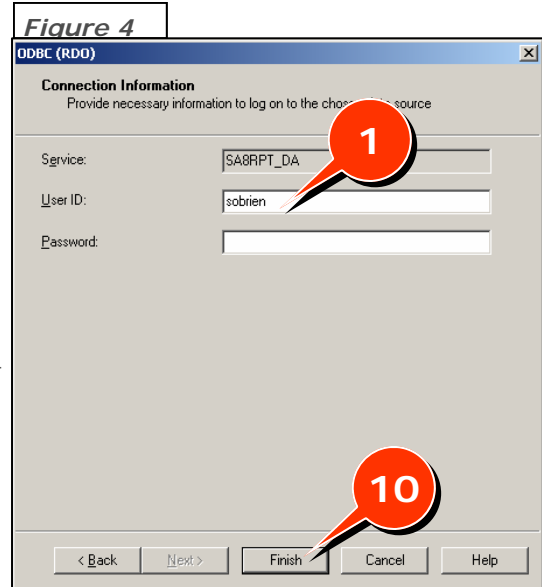


### Most Commonly Used Tables for Student Administration

Some of the most commonly used tables are listed below with details on the information they include:

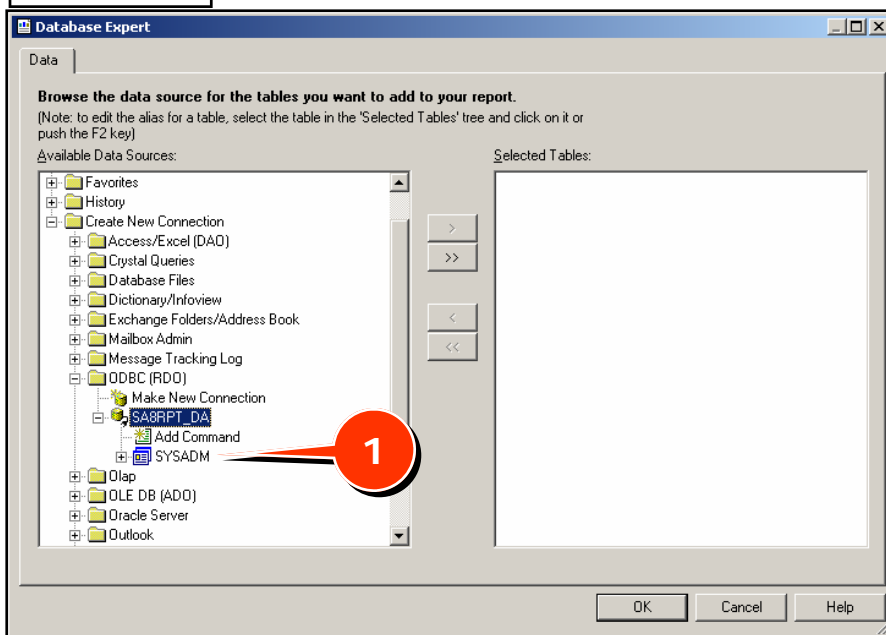
- PS\_TU\_BIO\_DEMO:** All BIO data including E-mail, permanent and campus addresses, residence, athlete and employee indicators.
- PS\_TU\_ENROLLMNT:** All courses taken by term with units and grades.
- PS\_TU\_PRG\_PLN\_SBPL:** Program, plan and sub plan, program status, program actions, admit term and degree checkout status.
- PS\_TU\_CRSE\_INFO:** All information about courses including description, sections, enrollment totals, location, instructor, etc.
- PS\_TU\_AD\_EXTRACT:** Information on admission applicants for current term and beyond.
- TU\_AD\_EXTRACT\_HIST:** has past semester information.

Log in using your Oracle (RPT) account username and password (Figure 4).



Click **“Finish”**. If your login was successful (no error messages), the SA8RPT\_DA under **“Available Data Sources”** will expand. This may take several seconds.

**Figure 5**

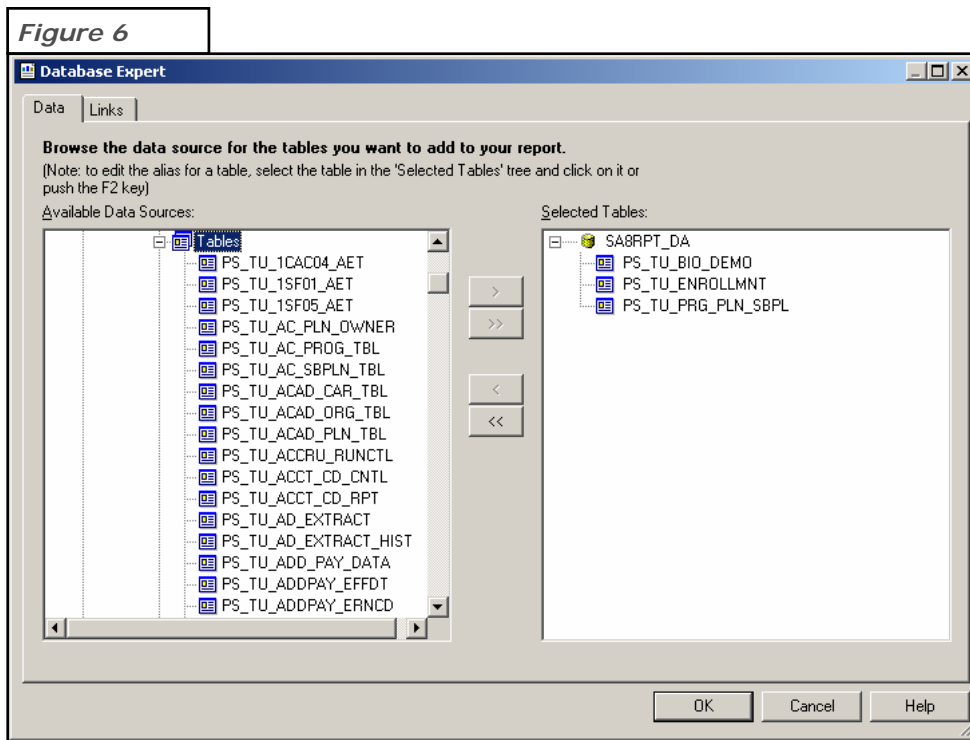


Select the **“+”** next to or double-click on **“SYSADM”** (Figure 5, 1). Depending on your Oracle role, you may see selections under SYSADM called **“Tables”** and **“Views”**. Expand **“Tables”** by clicking the **“+”** sign next to **“Tables”**. This may take several seconds before all the tables appear. Select the following tables to include in this report:

**PS\_TU\_BIO\_DEMO      PS\_TU\_ENROLLMNT      PS\_TU\_PRG\_PLN\_SBPLN**

Tables can be selected multiple ways. One, by highlighting tables one at a time and clicking the **“>”** to place them in the **“Selected Tables”** area of the dialog box; two, by using the **CRL** key option to select all the tables needed, then clicking the **“>”**; three, by double-clicking on the desired table(s).

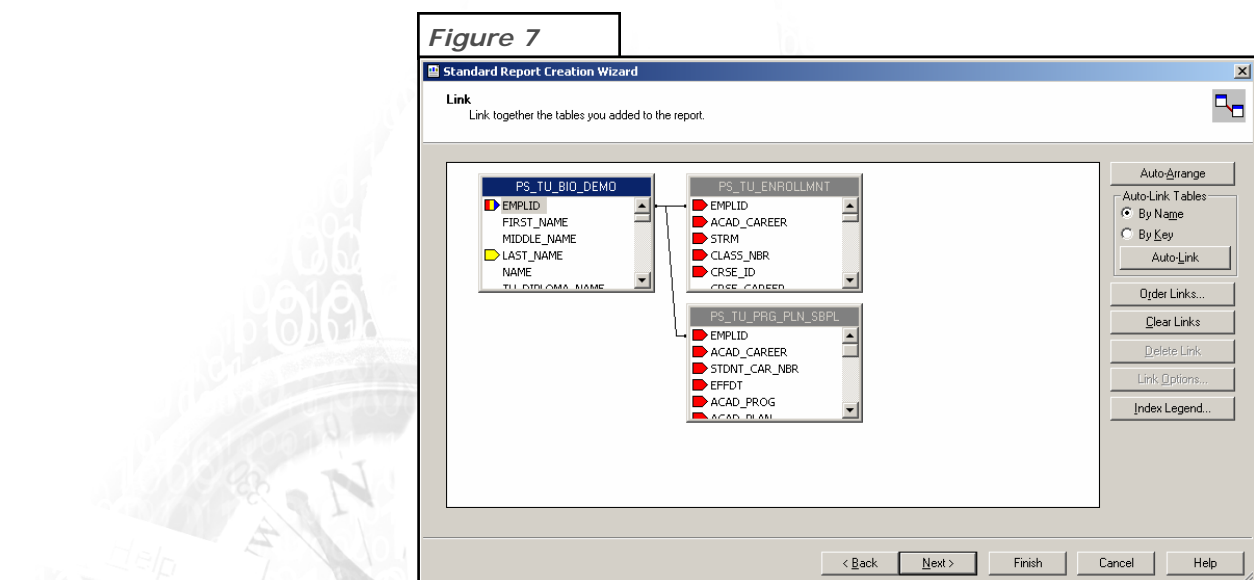
The screen should appear as follows (Figure 6):



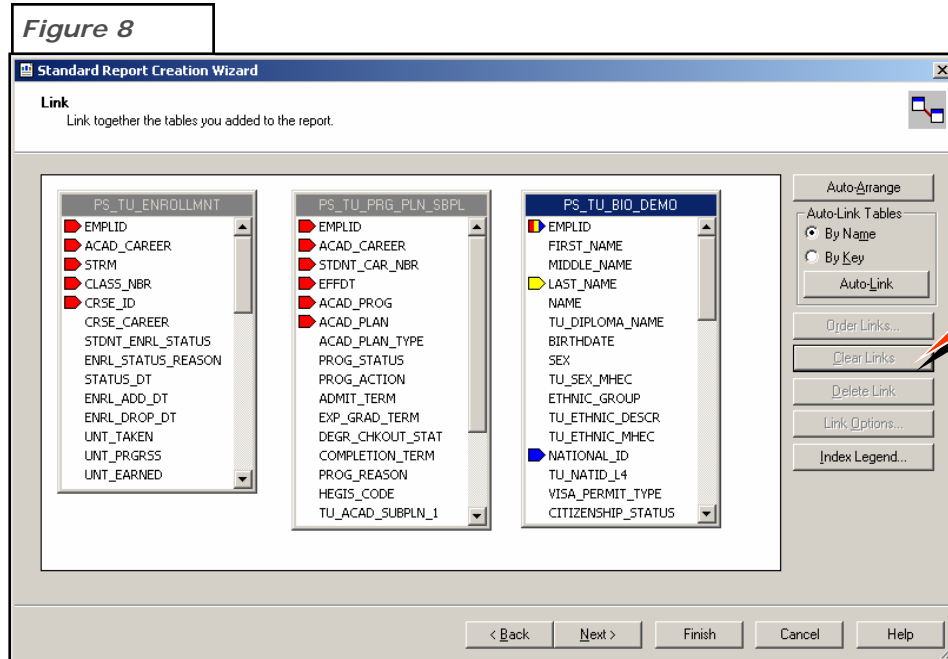
Click "Next"

The next screen will show an Entity Relationship diagram, with lines indicating how the tables relate to one another. The colored arrows indicate indexed fields. Linking to indexed fields usually results in better performance. The lines are called "link lines" (or *join lines*), indicating how the tables are joined. By default, the tables are automatically linked by a common field name. This may or may not be the way you want your tables arranged. I prefer to arrange them based on the criteria for my report.

The diagram should appear as follows (Figure 7):

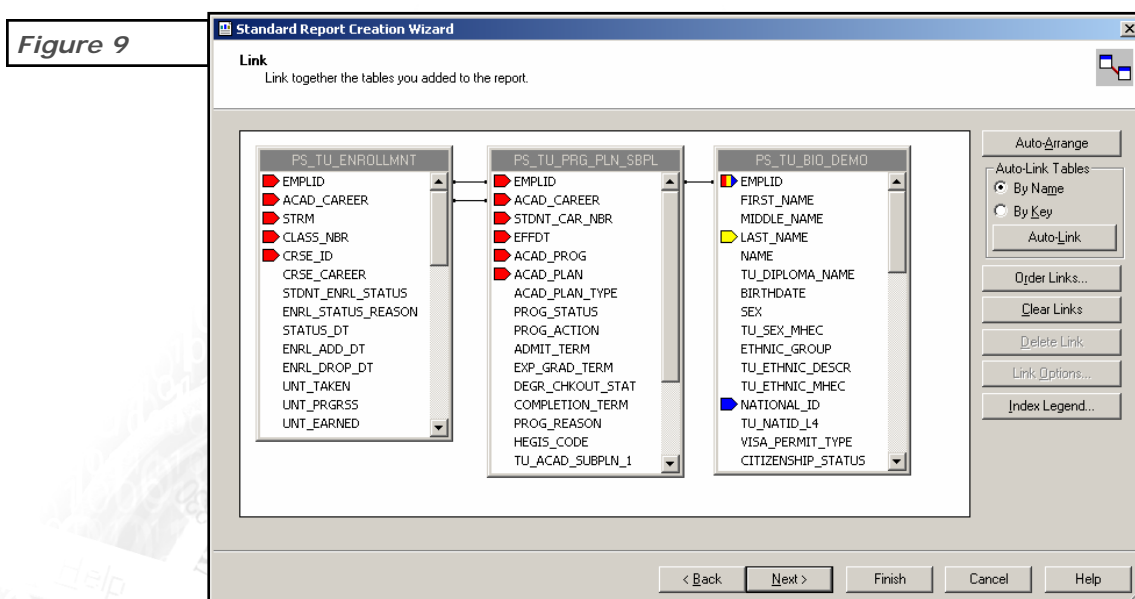


Since the criteria we are going to use for this report includes the names and email addresses of all currently enrolled students with an Academic Plan of either "MCOM" or "POSC", we are going to move the tables around, placing the Enrollment table first and the Bio Demo table last. Hit the **Clear Links** button on the right hand side. By clicking on the tables, and holding down the left mouse button, drag your tables around so that they appear in the following order (Figure 8, 1):

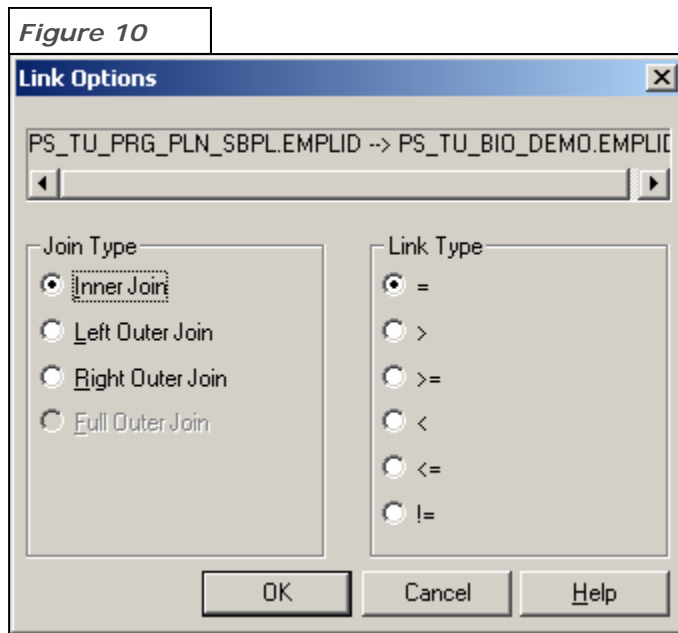


Next, we need to join our tables. *Every table in every report must be linked* in some way. If not, a Cartesian product will result, otherwise known as a "runaway query", which could potentially affect performance of the database server, slowing everyone else down who is accessing it.

Highlight EMPLID in the PS\_TU\_ENROLLMNT table. Holding down the mouse button, drag it so that it touches the EMPLID in the PS\_TU\_PRG\_PLN\_SBPL table and release. Continue joining until your screen appears as follows (Figure 9):



Click on a link line (it will turn blue to indicate that it is selected). Right-click on the blue line or select "Link Options" from the right hand column. The box presents the user with the different types of table joins (Figure 10).



The "Inner Join" is the same as an Equal (or Equi-) Join. That means that in order for data to be returned, the joined fields must be equal. For example, if we say we want email addresses for all students for term 1064, whose ACAD\_CAREER equals "UGRD", only those students in the first table who meet that criteria AND have an email address will be returned.

The "Left Outer Join" will return all those students in the first table and all those in the second table, regardless if they meet the specified criteria. For example, some students may not have an email address; therefore, we want to create an OUTERJOIN on the PS\_TU\_PRG\_PLN\_SBPL table to the PS\_TU\_BIO\_DEMO table. **Click "OK"**.

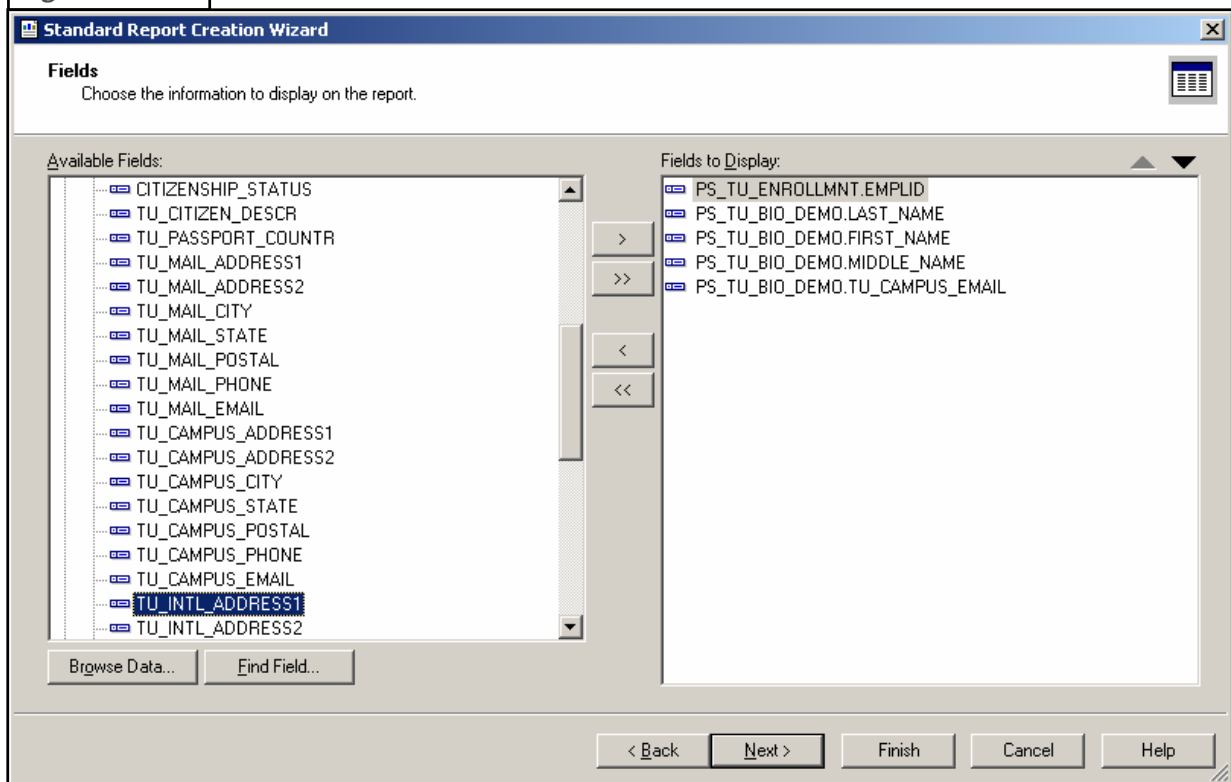
Now that we have our tables and joins, we will select the fields that will appear in the report. To do so, **click "Next"**.

Select the following fields

PS\_TU\_ENROLLMNT.EMPLID  
PS\_TU\_BIO\_DEMO.LAST\_NAME  
PS\_TU\_BIO\_DEMO.FIRST\_NAME  
PS\_TU\_BIO\_DEMO.MIDDLE\_NAME  
PS\_TU\_BIO\_DEMO.TU\_CAMPUS\_EMAIL

The Report Creation Wizard window should appear as follows:

**Figure 11**



Clicking the **Next** button will bring us to the grouping section. This is where you would group on a selected field(s). If you select a group and click **Next** you will be asked to select the field you wish to summarize on. By default, the group field will be summarized. We will not be adding a group at this time, so bypass this section by clicking **Next**.

The next page will allow us to filter the data (select certain records). For starters we will select the "STRM" from the PS\_TU\_ENROLLMNT table, double-clicking or hitting the ">" to move the field to the "Filter Fields" section. Then in the drop-down box below our selection, click on the arrow and change it to "is equal to" (the default is "is any value"). You may click on the arrow for the drop-down box, which now appears below the first drop-down box, or you may type in "1064". By selecting the arrow, you will see what values are available in that field in the database. If you choose this option, the field values will take a few seconds to appear.

**In addition, add the following filters:**

PS\_TU\_ENROLLMNT.ACAD\_CAREER = "UGRD"

PS\_TU\_ENROLLMNT.ENRL\_STATUS\_REASON="ENRL"

(UGRD = undergraduates; ENRL = enrolled students)

