

NVivo Advanced Workbook Professor Linda Sweet

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Prerequisite knowledge

People undertaking the advanced workshops are expected to have the basics skills of using NVivo as outlined in the NVivo Basics Workbook. The advanced workshop will build on (but not repeat) the skills covered in the NVivo basics workshop. It is really important that you consolidate the basic skills before moving onto the advanced workshop.

Objectives

Upon completion of this NVivo advanced workshop students will know

- How to import and work with survey data in NVivo
- Creating classifications and attributes
- Working with collections and search folders
- How to use the find and advanced find tool bar
- How to conduct advanced queries in NVivo



Chapter 1: Introduction

In the NVivo basics workshop you were introduced to the NVivo launch pad, project structure and layout, the ribbons and keyboard functions for common NVivo functions, as well copying and backing up your project and files. From there, we created and imported compatible text files, annotated them and created memo links.

Then came coding and nodes! We coded using right mouse clicks, ribbons, code InVivo, we dragged and dropped, and used the speed coding tool bar. We moved and merged nodes, turned on coding stripes, and then undertook some basic text searches and word frequencies. If you feel unfamiliar with these functions I suggest you revisit the Basics workbook for a refresher before attending the next workshop or working through this guide.

In the advanced workshop we move to some of the more advanced capacities of NVivo. However, as with all computer training workshops, the contents of this workbook are not exhaustive of the capacities of NVivo. To learn all of the functionalities of NVivo it takes over 2 to 3 days of training and many hours of practice to master the tasks. However, in this advanced workshop, I have chosen what I believe to be the most valuable processes which can be covered in the available time. You will see throughout this workbook that I have incorporated many URL links to resources provided online by QSR International, the owners of the NVivo software. These will be invaluable reference points to remind you of the functions taught throughout this workshop.

Where to get help?

There are a number of ways in which you can seek help for using NVivo. There is built in Help files which cover every aspect of using NVivo. NVivo will automatically install these Help files on your computer (offline Help) but defaults to try to access online Help (via the web if you have an Internet connection). If you are not connected to the Internet, NVivo opens the installed offline Help. Online help is to ensure you are getting the most up to date and accurate information at all times.

To open the Help, do any of the following:

- Press F1
- Click the File tab, then point to Help, and then click NVivo Help.
- Click the Help icon in the upper right of the NVivo ribbon or any dialog box—when you open the Help from a dialog box, the relevant topic is displayed.
- On the NVivo Welcome screen, click the Help button at the bottom of the window

Alternatively, you can access the NVivo Community through **Facebook**, **Twitter**, **LinkedIn**, **QSR Forum** as well as view many tutorials on the **QSR You Tube channel**. Don't be concerned about using old version NVivo resource as the core capacities and processes are the same.

Ok, so lets go....

Chapter 2: Working with survey data

Survey style data such as that generated from questionnaires or online surveys, or social media such as Twitter or Facebook can be imported into NVivo for analysis. Due to the multiple ways to generate such data, NVivo refers to these as datasets. It is common for datasets to contain quantitative and qualitative components. Whilst the use of statistical analysis software remains the cornerstone for primary statistical analysis, NVivo is ideal for analysing the qualitative data and using the quantitative responses as variables for further analysis of the qualitative data.

If you are working with a dataset of survey results, you may also want to watch the video tutorial Work with survey results. (https://www.youtube.com/watch?v=f2dHNbEhsog&feature=youtu.be)

The easiest way to learn the basics of datasets is to get familiar with the columns and rows in your dataset, and familiarise yourself with what is a quantitative response (such as forced choice option questions such as gender and age) and qualitative response (such as open text question). These are vital distinctions for importing your dataset correctly.

The table below displays an example of a dataset containing survey responses. Each record (row) represents a single survey respondent. The fields (columns) contain demographic information about the respondent or their responses to the survey questions.

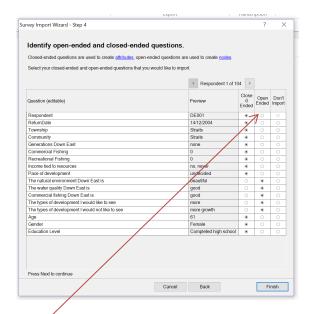
Respondent	Age	Sex	Feelings about university campus	Ideas for improvement
Sue	21	Female	I love the IT hub – the staff are so helpful	Electric buses would help reduce pollution on campus
Paul	23	Male	Pedestrians need to feel safe. There should be better lighting and more security.	We should create more green spaces.

- Classifying fields—contain information about your data—for example, the age and gender of survey respondents. Classifying fields have a grey background when using the import wizard.
- 2. **Codable fields**—contain the information you want to qualitatively analyze—for example, responses to open-ended survey questions. Codable fields have a white background when using the import wizard.

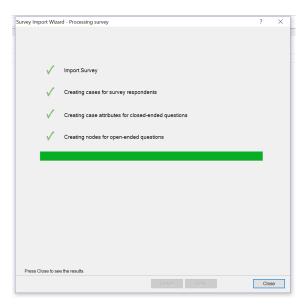
Importing a dataset

Before importing your dataset it is important that you have 'cleaned' your data, that you have changed any numerical references to the words if you wish (i.e. 0=no; 1=yes), and that every respondent has a unique identifier. Once imported into NVivo datasets cannot be edited, so make sure you have it right before you start. The best way to import your dataset is though the import wizard. To do this you will need to know which columns you want as **Classifying fields** and which you want as **Codable fields**. If this is done incorrectly on import you may as well delete it and start again! Remember classifying fields is for quantitative variables – to sort and filter with, codable fields are those you will need to analyse through coding and qualitative analysis.





Ensure you check the import type for each question, as these cannot be changed after import. The import wizard automatically codes the rows and columns into nodes and cases on import

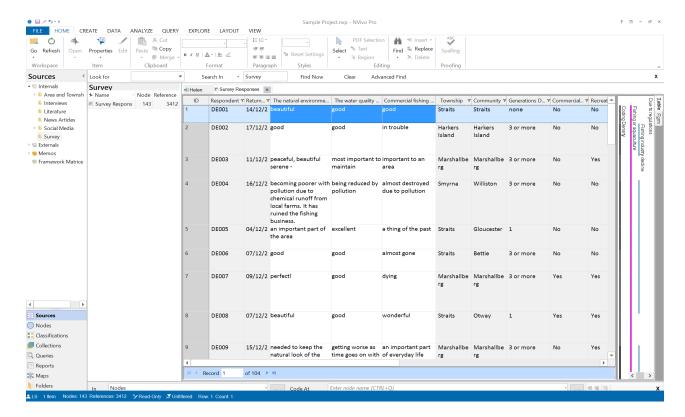


Task 1: Import the survey dataset, ensuring you get codable and classifying fields' right

Viewing your dataset

Table and Form View tabs—use these tabs to switch between Table View and Form View. When the dataset is open in Detail View, you can switch between Table View (view all records) and Form View (view one record at a time).

Each row in a dataset has a unique record ID automatically generated by NVivo, based on the order in which it is imported. This NVivo ID is the first column In Table View, and the first field in Form View. If you sort the dataset by the values in the ID column, the dataset is displayed in the order that the records were imported into NVivo. However, you **cannot** use this ID as a search field. Therefore, you **MUST** also include a unique identifier such as respondent number or code for each row. This will be the participant code to sort individuals' responses by.



Working with datasets

Once imported into NVivo, datsets can be filtered, sorted and customised. http://help-nv10.qsrinternational.com/desktop/concepts/about dataset sources.htm

Please remember the field of the data cannot be modified and the dataset cannot be edited. If you get it wrong on import you will need to delete and re-import it.

Datasets can be coded using the normal coding processes for codable fields, including character specific coding, and auto coding for entire cell content. You can identify codable fields by color—codable fields have a white background.

http://help-nv10.qsrinternational.com/desktop/concepts/approaches to analyzing survey results.htm

Coding data set materials

As previously discussed, coding is the process of examining the data and sorting it to be interpreted. In most approaches to qualitative analysis this is a human intellectual process of interpretation and deciphering data, although with computerised data some automated functions are possible.

In NVivo, there are four main coding choices:

- Code source will place the entire data source file into the node(s) selected. This is
 useful when wanting to put all data from one person or one organisation into one place
 for further analysis.
- Code selection will place the highlighted/selected text or image into the node(s) selected. This is the main method used for qualitative analysis.
- Code In-Vivo will place the entire highlighted/selected text into a node and apply the selected content as the Node name. Beware of using this for sentences and

paragraphs as it will not be what you want for analysis as the node name will be too long and not meaningful.

 Auto Code will sort the data based on the structure of the source file; using paragraph styles in text sources, or by rows and columns in table structured sources

All of these processes, as described in the basics workbook also function the same with multimedia sources.

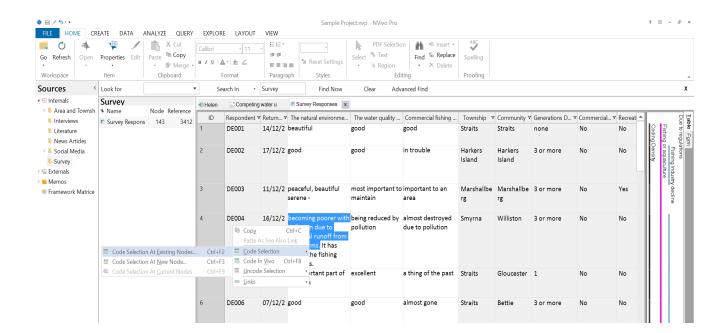
Coding dataset sources

Dataset sources can be coded in a number of different ways.

In datasets, you can select and code:

Task 2: code them using your preferred manual coding approach. Turn on/off coding stripes and see how they display

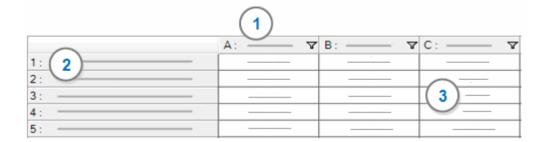
- The entire source; but remember only content in codable fields is coded.
- Text in codable fields by a single word, a phrase, or the whole cell.



Chapter 3: Classifications and Attributes

Ok, now we have covered the new source data types we have got to the hard bit! Often we have details about our participants, source data or places relevant to our research. For example you may want to use the demographic information about your participants such as age, gender and educational level. These may be important variables to consider when you undertake your analysis. If this is so, you need to have some way within NVivo to be able to easily compare and contrast by these attributes. Within NVivo this type of information is stored as classifications. You use classifications to store descriptive information about your sources or about the people, places or other cases in your project. I suggest you start with this video tutorial: https://www.youtube.com/watch?v=hn1u-r4Q5jo&feature=youtu.be.

A classification sheet allows you to see all the items assigned to a particular classification and see the attribute values set for each item.



- 1. There is a column for each attribute in the classification.
- 2. The first column displays the case nodes or sources assigned to the classification.
- 3. The cells contain the attribute values—you can select a different value or enter a new one.

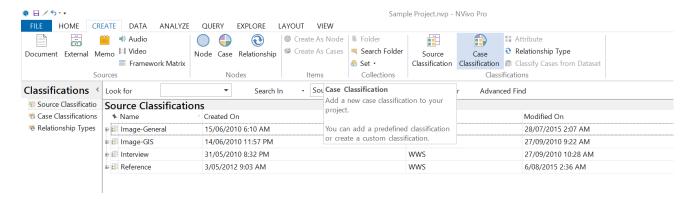
There are three subfolders in the section called classification. The primary ones you will use are the source and node classifications. However, whilst they function in a similar way, they are used for different purposes:

- Use source classifications to store bibliographical information about your sources—
 you can import this information from reference management tools like EndNote. A
 source classification has to apply to the whole source file (whether it be a PDF,
 interview transcript or data set and hence is not useful for focus groups, group interview
 data or where participants provide more than one source of data).
- Use case classifications to provide demographic details about the people, places or other 'cases' in your project. For example, classify a node as a Person and define attributes for age and education level. By classifying case nodes, you first create a 'case' node for each participant and apply the classification information to their personal case.

Creating classification sheets

The key concepts to understand when using classifications in NVivo are the **Classification** type, **Attributes** and **Values**. The first step to work through is to determine if you want to create a source or node classification. For the purposes of explanation, I will show you how to create a node classification sheet for your participants. Given that some of my participants

have undertaken more than one interview – I need to create the classification type as a node classification and not a source classification. This is because whilst I have 2 interview transcripts with Mary, if I classified the sources, NVivo would think I had two separate women called Mary. So from the create ribbon select Node classification.

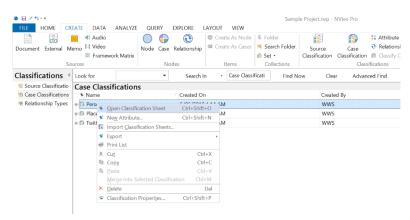


Given we I want to create a system to store information about individual participants – I will label my new node classification sheet "Participant". The next step is to consider the attributes and values for my participants. The **attribute** is the concept I want to capture such as age or gender, whilst the **value** is the specific information. So for the attribute gender, the value may be male or female. You can manually create each attribute and then apply the values for each attribute by rick clicking on the classification sheet and selecting new attribute.

Task 10: Create a case classification sheet and set up the attribute of gender

However, it is likely you have a table or spread sheet with this information on it already. If so, the quickest way to create the attributes and values is to import an excel sheet. For this to work, the excel table needs to be in the same format as the classification sheet shown above. That is cell A1 needs to have the same name as the classification sheet in NVivo. Column

heading row is the attribute labels, Row headings are the individual participant node names, whilst the remaining cells are the information you want to capture about each individual for the attributes.



Participant	Age	Gender	Education Level
Peter	40	Male	High School Certificate
Mary	32	Female	Bachelor Degree

Import classification sheet

- From the External Data ribbon select Classification Sheets
- The Import Classification Sheet
 Wizard will launch.

 Classifications

 Classifications

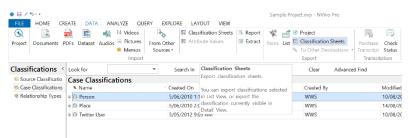
 Classifications

 Classifications

 Source Classifications

 Name

 Name
- Follow the steps commencing with selecting the file you wish to import
- Step 2 of the wizard is where you need to specify if you are importing as a node or source classification.
- Step 3 is where you need to identify the 'case' nodes if you have created them first – otherwise the wizard will automatically create these on import for you. BUT remember, you need to code the data for each individual to their own participant case node.



Task 11: Import the participant classification sheet and ensure you have the data coded at the participant nodes

Create node classifications from datasets

A dataset contains structured data arranged in records (rows) and fields (columns). On import into NVivo the data fields (columns) are identified as codable fields or classifying fields. You can use this information within the data set to auto generate your node classification values within NVivo.

To **classify nodes** using attribute values in a dataset:

- Open the **dataset** or select it in List View.
- From the Create tab, in the Classifications group, select Classify Nodes from Dataset.
- The Classify Nodes from Dataset Wizard opens.
- HOME CREATE DATA ANALYZE QUERY EXPLORE LAYOUT VIEW

 Audio

 Document External Memoi bi Video

 Framework Matrix

 Node Case Relationship

 Relationship

 Node Case Relationship

 Relationship

 Node Case Relationship

 Relationship

 Node Case Relationship

 Relationship

 Node Case Relationship

 Relationship

 Relationship

 Relationship

 Relationship

 Relationship

 Relations

Follow the steps in the wizard to create or update nodes and their attribute values.

Task 12: If you managed to import your dataset successfully, now create your node classifications from the dataset.

Chapter 4: Collections and search folders

Collections are groupings of items in your project. The most used collections are sets and search folders. The others are folders of links you create and is where NVivo stores the data.

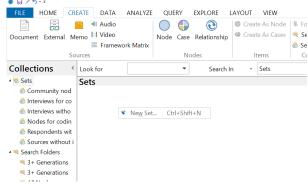
Sets

Sets are a flexible way of grouping your sources and nodes—for example, you might create a set for all of your data that relate to one family or organisation; or items you have yet to reviewed; or items you wish to share and discuss with your supervisor. Items in a set are references or 'shortcuts' to the original items—you do not physically move items into a set. This means you can delete an item from a set without removing it from your project.

A set can include any number of project items including sources or nodes, and any individual project item such as a source or node can belong in multiple sets. You can use sets to create temporary groups, and then delete the set when you no longer require it. Sets are a static entity – they are not updated automatically but you can modify them manually.

Create a new set and add members

- In the bottom of Navigation View, select **Collections** to display the **Sets folder**. From the top of navigation view now select Sets to display in list view.
- You will note that you cannot have subfolders of sets they are all listed in one level folder.
- From the Create ribbon, in the Collections group, select Set.
- The New Set dialog box opens; enter a name for the new set. Select OK and the new set is added to the Sets folder.
- In the sets folder within Navigation View, highlight the new set so it is displayed in the list view, and then rightclick in List View field and select Add Set Members.
- The Select Project Items dialog box opens.
- Select the project items, such as sources or nodes you want to add to the set and click OK.



Task 13: Create a set of project items all containing the word environment

Search Folders

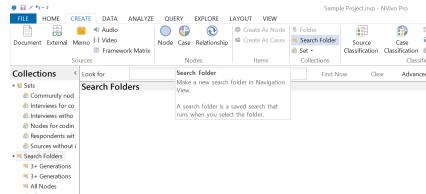
Search Folders display project items that meet previously defined search criteria—for example, a Search Folder might display all nodes you created in the last week. Unlike sets, search folders are dynamic and will auto populate based on the defined criteria. The project items displayed in a search folder, remain stored in other NVivo folders. Again, like sets items in a search folder are references or 'shortcuts' to the original items—you do not physically move items into these folders. You can create your own Search Folders by using **Advanced Find**, and selecting the **Add to Project** as **Search Folder** check box to save the criteria as a Search Folder.

Saving an Advanced Find criteria as a Search Folder means you can execute the Find any time you want to, simply by opening the Search Folder. For example, you can create a Search Folder to find any nodes that you have created which have the node classification of Participant. Whenever you open the Search Folder, you will see a list of nodes that meet the search criteria at that point in time. If you change your project (for example, add or remove nodes), then the items shown in the Search Folder will change.

You can use Search Folders to select the items you want to show in charts, cluster analysis diagrams and tree maps. You can also use Search Folders in the scope of queries—this allows you to create queries with dynamic scope. As items in your project are added, deleted or modified, the items in the Search Folder change, and if you run the query again, it may return different results.

Create a new search folder

- On the Create tab, in the Collections group, select Search Folder.
- The New Search Folder dialog box opens; enter the name and description of the search folder
- On the Search Criteria tab, create your search criteria—refer to Advanced Find in the following chapter for detailed information on using this dialog box.



Task 14: Create a search folder for all nodes with attribute gender equals male

Chapter 5: Find, Advanced Find and Query search functions

Once you have your data in NVivo, you need ways in which to navigate around and locate the information within in it. NVivo has two different approaches to finding information within the database. The Find tool will locate project items by the label or classifications you have given them, whilst the query tool allows you to find information within project items.

Use the Find bar to find project items by name

The **Find bar** is displayed at the top of List View. If the Find bar is not available at the top of List View, it is turned on or off in the View ribbon.



You can use the Find bar to find project items based on their name or characters contained in their name. For example, you could find all the sources, nodes and sets that have environment somewhere in their name.

To find items by name:

- In the Find bar, enter the item name (or part of the name) in the Look for box.
- From the Search In list, select the folder that you want to search using the drop down arrow
- Click Find Now.
- Items that match the criteria are displayed in List View. From here, you can open items, add items to a set, print items, copy items to a model and so on.

Task 15: use the find bar to locate items with word 'fish' in their name/label

To find items using advanced find:

- Select Advanced Find on the right hand side of the Find bar
- The advanced find dialogue box appears which allows you to locate project items that meet specified criteria.
- This dialog box has two tabs—Intermediate and Advanced—you can define your search criteria on either tab.
 - The Intermediate tab allows you to define common search criteria—this makes it easy for you to set the search criteria. For example, you could use this tab to find all nodes you created last week.
 - The **Advanced tab** allows you to set as many criteria as you want. This is useful when you have complex search criteria—for example, you could use this tab to find, all external sources classified as Book that were published in the United Kingdom before the year 2000 and are coded at the node Ship Building Industry.
- See the following URL for further examples of Advanced finds http://help-nv10.qsrinternational.com/desktop/dialogs/advanced find and search folder options.htm

Queries

Queries provide a flexible way to gather and explore subsets of your data. In NVivo, you can create queries to find and analyze the words or phrases in your sources, annotations and nodes. You can find specific words or those that occur most frequently. You can undertake more advanced functions to ask questions and find patterns based on your coding and check for coding consistency among team members. In the basics workshop we covered the basic search techniques of **Text Search** and **Word Frequency**. In this advanced workshop we will cover a **Matrix coding query**.

How do I set up a coding query?

NVivo queries offer a flexible approach to exploring your data, you can create quick and simple queries to get a sense of what is happening in the data or you can build detailed queries for a more focused perspective. Queries are essentially NVivo's name for criteria questions. The query questions you ask can be developed, reviewed, refined, and saved for running again another time. The query results can be previewed or saved for further analysis.

The best way to become familiar is to run some simple queries and preview the results. As you grow in confidence you can look at building more complex criteria and storing your results in nodes and sets. When you create any type of query the query properties dialogue box comes up. Each of these vary in complexity but most have the same structure.



- **1** The **Criteria** is used to define the criteria for the query—what are you looking for and where do you want to look?
- **2** The **Run or SAVE Query Option** is used to determine how the query results are displayed and stored. Do you want a temporary preview of results or do you want to save them in a node or a set? The default is to preview first, which is a great place to start ©
- **3** The **Save results** comes active only when you have output, and allows you to name and save the query result
- **4** The **Add to Project** gives you the option to save the query question. This means you can easily run the query again. By default, queries are stored in the Queries folder.

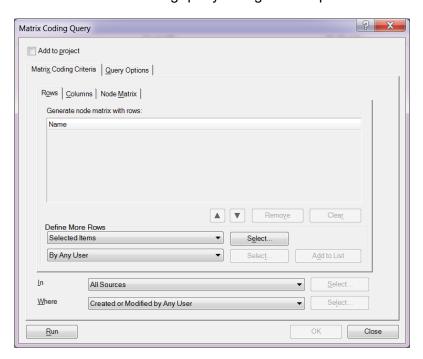
There is a query wizard which helps you to identify the type of query you want to ask and steps you through its creation. However, if you then select 'Last Run Query" the dialogue box reverts to the original style and hence I will demonstrate here, using the original dialogue boxes.

Matrix coding query

Matrix coding query is the most complex but very powerful queries and allows us to find a combination of items (usually nodes and attributes) and display the results in a table. Each cell of the matrix table is a live direct link to all of the data that fits the criteria for the cell. Doing one matrix is the same as doing multiple single coding queries at the once.

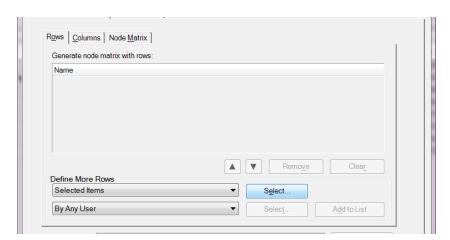
To create a matrix coding query:

- Select **Queries** form the navigation pane. This will show any saved queries you have that can be run.
- To create a new query select Matrix Coding from the Query Ribbon.
- The matrix coding query dialogue box opens

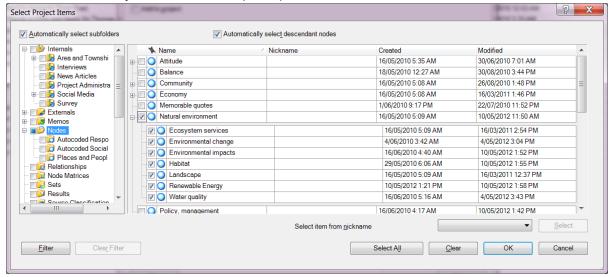


Task 16: Create a matrix
coding query for all
nodes coded to the
natural environment
node (and child nodes)
against age values or
gender values

The first task is to identify the rows of the table – in our example it will be the natural
environment node and its siblings. So with the Rows tab uppermost, click Select
besides the Define More Rows option with Selected Items in the drop down menu.

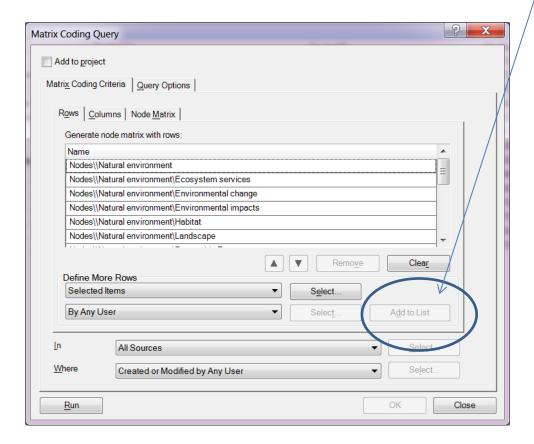


- The **Select Project Items** box opens and you need to navigate to show and select the nodes you want in your query.
- Use the + boxes by the headers to open up sub-folders



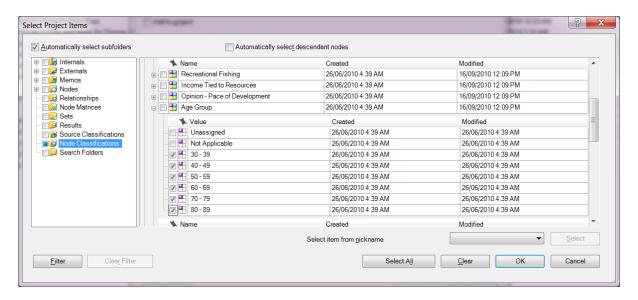
Once chosen, select **OK** then on the matrix coding query be sure to select **Add to** List

• You must see the nodes in the white box of the Rows tab like this

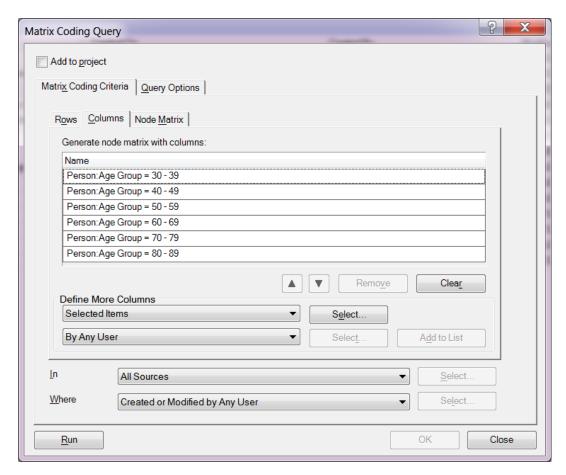


The second task is to identify the columns of the table – in our example it will be the
values for the age attribute. So with the Columns tab uppermost, click Select besides
the Define More Columns option with Selected Items in the drop down menu.

Once chosen, select **OK** then on the matrix coding query be sure to select **Add to** List

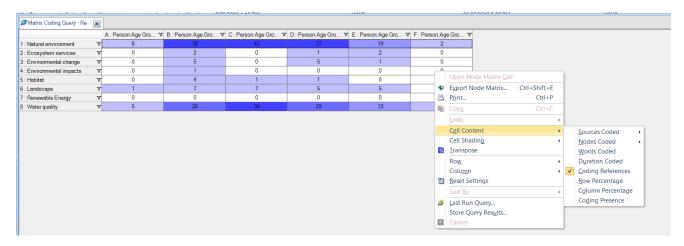


You must see the values in the white box of the Columns tab like this



- The third task is to identify the sources which you want included in your search. In our
 example we have multiple sources of data including interviews, focus groups and
 survey data. The default setting is All Sources but you can narrow the scope to only
 the interviews for example if you want. For now I will keep it at all sources.
- Select Run.

- The result your get will look like this
- Here I have right mouse clicked over the table and selected Cell Shading choosing the Blue-White option. This makes it easier to see the difference in results.
- **Cell Content** will default to the number of **coding references** found that meet the intersection criteria.
- The cell content can be changed again in the right mouse click options as shown.



 So what this matrix is showing me is the number of references coded for each node separated by the age groups. I can now select the 30-39 age group response and compare it qualitatively to the 50-59 year olds point of view for example. Each cell is live and active with the coded data. Just double click a cell and see the magic!

To review/modify a matrix coding query:

- Select Last Run Query from the Query ribbon and the query dialogue box will display with the previous criteria.
- Here you can refine/modify/change your criteria and/or what NVivo does with both the question itself and the results.
- Use the Add To Project box to save the query question to run at a later time
- Use the Query Options tab to save the results when you next run the query

in preview only mode to ensure I have written it correctly to get the result I am seeking. Once I am happy with the question I save the question and or the result. This avoids getting too many query questions in the query folder and too many results that I don't need.

Task 17: Modify your matrix coding query for all nodes coded to the natural environment (and child nodes) against gender values and save the query

Chapter 6: Explore within NVivo

We will not have time to demonstrate all of the remaining NVivo functions – so I have created this help list for your to self-navigate the help files to learn more about visualising your data, exporting and reporting.

Visualisations: Charts, Graphs and Models

You can use charts and graphs to explore or present your NVivo project. You can use a model to map out your ideas or to explore and present the connections in your data. To find out more watch the video tutorial Visualize your project and review the help pages:

Charts

About Charts:

http://help-nv10.gsrinternational.com/desktop/concepts/about_charts.htm

Creating a chart

http://help-nv10.gsrinternational.com/desktop/procedures/create a chart.htm

Graphs

About graphs

http://help-nv10.gsrinternational.com/desktop/concepts/about_graphs.htm

Create a graph

http://help-

nv10.qsrinternational.com/desktop/procedures/create and work with graphs.htm

Models

About models

http://help-nv10.gsrinternational.com/desktop/concepts/about models.htm

Create a model

http://help-nv10.gsrinternational.com/desktop/procedures/create a model.htm

Add shapes and connectors

http://help-nv10.gsrinternational.com/desktop/procedures/add shapes and connectors.htm

Exporting and printing

Everything that goes in can come out! All content existing in an NVivo project can be exported for use in other software programs or printed. Individual sources, node content or even lists of items can be exported or printed. Be aware that some of the content functionality will be lost outside of NVivo.

Exporting project items

http://help-nv10.gsrinternational.com/desktop/procedures/export_project_items.htm

Printing project items

http://help-nv10.gsrinternational.com/desktop/procedures/print project items.htm

Reports

As your project grows you can use reports and extracts to review and revise your progress. Reports can be created using the inbuilt templates or you can create your own report style using the report wizard.

About reports

http://help-nv10.gsrinternational.com/desktop/concepts/about reports and extracts.htm

Run reports

http://help-nv10.gsrinternational.com/desktop/procedures/run reports and extracts.htm

Create reports using the wizard

http://help-

nv10.qsrinternational.com/desktop/procedures/create reports using the report wizard.htm

Revision tasks

Locate where the project file has been saved.

Make a backup copy of your project to a USB.

Transcribe the audio interview with Helen

Write detail about the image file you have imported in transcript rows

What is the difference between text pointer and region pointer and how do you change this?

Import your dataset and autocode the codable fields by columns

Turn on coding stripes for multimedia files

Run a matrix query for coding by a classification such as age or gender

Develop a model to depict your emerging thematic ideas

Run a chart of the coding for a source file

Run a chart for the sources to a node