Course objectives:
Making content into data
- Create a Project
- Working with Documents and Datasets
- Understand coding nodes and cases
- Explore and analyse data
- Use Visualisation tools

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Exercise files: Go to https://web.library.uq.edu.au/library-services/training/training-resources
**NVIVO: 12Pro**

NVIVO is designed to facilitate common qualitative techniques for organising, analysing and sharing data in a research project. NVivo can help you manage, explore and discover patterns in your data but it cannot replace your analytical expertise.

### Exercise 1. **Access NVIVO**

1. Double-click the **Nvivo 12** icon

2. Complete profile details, if prompted

3. Add your initials.
   These will be used to identify your edits as you progress

4. Click on **OK**

During your session you will receive on-screen prompts to save your progress. The save time can be changed via **File** (tab) – **Options** – **Notifications** (tab)

### Getting Started

#### Exercise 2. **Create a new project**

1. Click on the **Blank project** option

2. Complete project details

3. Click **Browse** to save project to your preferred location.
   **Note:** If you are collaborating with other users it is advisable to tick the checkbox to Write user actions to project event log

4. Click on **OK**
The NVIVO interface

Exercise 3. Building a Mind Map

When considering topics that may be present in your data you can create a mind map to visually explore potential concepts. These can be used as a brainstorming tool for Planning your node hierarchy, during analysis to explore how people talk about a topic or to plan how you will tell the story of your research.

a. Create a Mind map

1. Click on the Explore tab and click Mind Map

2. Enter a Name: Mind Map Intro

3. Add a Description (Optional)

4. Click on OK

Note the location “Maps” found in the Navigation view towards the bottom

A new tab for Mind Map tools will appear in the ribbon
5. Double click map **Core Idea** to enter text
   “Early thoughts on coding”

6. Click on **Child Idea** button

7. Add the text **Economy**

8. Repeat step 6 to add the child idea **Real Estate Development** to the Economy idea

9. Click on the **Sibling Idea** button

10. Add the text **Fishing**

11. Continue to create the Mind Map as shown:
    - **Select Fishing:** Add **Child** = Commercial Fishing
    - **Select Commercial Fishing** Add **Sibling** = Recreational Fishing
    - **Select core object:** Add **Child** = Natural Environment
    - **Select Natural Environment:** Add **Child** = Water Quality
    - **Select Water quality:** Add **Sibling** = Habitat
      - Add **Sibling** = Landscape

1. Click the **Floating Idea** Button on the Mind Map tab

2. Add the text **Community Culture**
3. Click on the Fill button
4. Click on the Border Colour button
5. Click on the Border Width button
6. Select a wider border for the idea object

7. Select a layout for the Mind Map in the ribbon

b. Mind Map Output
1. Right click in mind map area
2. Select Export Map
   Alternatively
   • Click Share tab - Export
3. Enter details to save Mind Map as a static image
4. Click on Save
5. Click on File in ribbon
6. Select Close
   Save project if prompted

Exercise 4. **Open a project**

A standalone project is a .nvp file saved on your computer or on a network drive.

1. Click the File tab
2. Click Open.
   
   **Note:** Ensure NVivo Projects from the File or Project type list is displayed
3. Locate and select project you want to open.
4. Click Open.
Exercise 5.  

**Nodes from a Mindmap**

Nodes are like containers that hold all the content about a particular theme or topic in your project.

a. **Create Nodes from a mindmap**
   1. Open *Training Project 1*
   2. Go to *Maps*
   3. Double click *MindMap Intro*

   ![Image of MindMap Intro]

4. On the Mind Map tab - click *Create as Nodes or Cases*

5. Select the *Nodes* folder
6. Click on *OK*

   ![Image of creating nodes]

7. Click on *Nodes* in Navigation view
   Empty nodes are created based on the Mind Map structure.

b. **Edit Nodes** - Nodes can be deleted or re-arranged. If a parent node is to be deleted but the child nodes retained, the child nodes need to be allocated a new parent node in the first instance.

   If we wish to delete the Early thoughts on Coding node we will need to re-allocate all the child nodes below it.
   1. Click on *Economy* node
   2. Hold Ctrl and Click on *Natural environment* node

   ![Image of editing nodes]

3. Drag these selected nodes over the *Nodes* folder in the Codes area of the Navigation View

   Note: If you drag into the Quick Access area at the top of the Navigation view you will create Shortcuts to the nodes. If you do this and wish to remove the shortcut right mouse click the shortcuts and choose Remove from Quick Access.
4. Right click on the Early thoughts on coding node in the List View
5. Select Delete
6. Click on Yes to confirm deletion

Exercise 6.  
Add file structure

1. Navigate to Data
2. Right Click Files
3. Select New Folder
4. Enter Interviews in the Name area
5. Repeat for Survey Data

Working with Data

Exercise 7.  
Prepare Content

This exercise uses Microsoft word and is preparation of data prior to importing into a project although styles can be added to a document within NVivo

1. Open Barbara.docx in Interviews folder in File Explorer
2. Apply heading styles to the Interview text:
   • Heading 1 – Question 1
   • Heading 2 – Names (Henry and Barbara)
   • Interviewer – Questions asked
3. Save and Close **Barbara.docx**

Adding styles to your text in Microsoft Word can improve how it is coded in NVivo.

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Exercise 8. **Import Content**

a. **Bring in a document**

1. Select **Interviews** folder
2. Click the **Import** tab
3. Click the **Files** button

4. From the downloaded course files: Select All interviews in interviews folder
5. Click on **Open**

6. Click on **Import**

7. Click on **OK** in the Document Properties window, if required

**Note:** Your files are added to the interviews folder

8. Double-click an interviewee to view content

As you access each source it will display in a tab of its own in the detail view pane. Click the cross to close a tab.
**Coding Nodes and Cases**
Coding allows you to organize your sources for later data analysis. Applying coding to your content will organise text into certain nodes/containers. This is the start of the process to make your content into data.

There are two approaches to coding source content:

1. Organise the data into broad topics then explore your nodes for each topic and do further coding.
2. Perform detailed coding as you go through sources, creating nodes as you need them and later combining or grouping nodes into related categories.

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**Exercise 9.**

**Coding to new nodes**

**a. Code data manually**

1. Double click to view the details of an interview (Barbara).
2. Highlight a line of text.
3. Right click the selection.
5. **Alternatively**

7. Click the **New Node** button.
8. Enter a name for the node ‘Years in Town’.
9. Click on OK.

Check the list of Data - Files. Coding has been added to the first interview.

10. Repeat for another line of text.
11. Add to the ‘Years in Town’ node.

Check the list of Data - Files.

12. Open another interview (Charles).
13. Navigate to Nodes.
14. Select text.
15. Drag over node ‘Years in town’.
16. Repeat for another interview – (Dorothy).
Exercise 10.  
**Display Coding**

This setting only applies to the data currently in view. It is not a global setting and will have to be switched on/off, as required, for every source opened.

1. Go to the Document Tools - Document Tab
2. Click on Coding Stripes
3. Select Recent Coding

The *coding density* will display and the node will show with a bar to identify each reference. Click on the coding stripe to highlight your coding in the document.

a. **Remove code**
   1. Right click on a coding stripe
   2. Select Uncode

b. **Remove highlight**
   1. Go to the Document Tools – Document Tab
   2. Click on the Highlight button
   3. Select None

Exercise 11.  
**Coding to existing nodes**

a. **Code documents**
   1. Navigate to Data - Files
   2. Open a few interviews
   3. Select some text
   4. Right click on selected text
   5. Select Code...
6. Hold Ctrl key to select nodes:
   - Community Culture
   - Realestate Development
   - Natural Environment

7. Click on OK
   Check the Node hierarchy, coding has been added to the appropriate nodes

8. Repeat for other interview responses

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Exercise 12.

1. Go to Nodes
2. Double Click to open Fishing

3. The node content will display each reference under a source link
   The amount of the source coded is shown as a percentage. Click the blue link to open the source and view the coding

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Exercise 13.

Auto Coding – Nodes

Please be aware this Autocoding in this way only works when using a PC. Autocoding is only available for Datasets (set out in columns and rows) if you use a MAC.

a. Based on structure
   Autocoding by structure works based on styles, and the use of consistent use of styles is critical.
   **What we’d like to code are the responses to each question** - In the sample data each question has the Heading 1 style applied and we can use this to autocode.

1. Navigate to Data - Files
2. Select all the interviews
3. Go to the Home tab
4. Click on Auto Code
5. Autor Code Wizard will launch
6. Choose Paragraph styles and click Next
7. Click on the style to be coded - **Heading 1**
8. Click the >> arrows to transfer right
9. Click on Next

10. Click the Under field

11. Select New Folder

12. Add a name - Interview Questions

13. Click on Finish

### Exercise 14. View Node References

1. Click Nodes in the Navigation view
   Double-click Nodes to expand if necessary

2. Click on Interview Questions
   References will be displayed in detail view

3. Double click on a question node
   Content will be displayed in the Details View

4. Click on the source link at the top of each reference to open the source

5. Scroll through the node questions to see the other coded source content
Exercise 15. **Merge Nodes**

1. Right click on the last question in **Nodes/Interview Questions**
2. Select **Cut**

3. Right click on the last Q.6.
4. Select **Merge into Selected Node**

5. Click on **OK**

Check the sources and references totals have been merged

**Working with Cases**

Exercise 16. **Auto coding - Cases**

Cases are simply a different type of Node or container. Cases can help keep all data related to a given participant in one place. eg if you are doing a longitudinal study or are working with demographic data.

*What we’d like to code is every interviewee as a case – in the interview documents each speaker has the heading 2 style applied to their name*

1. Select all the interviews in Data - Files
2. Go to the **Home** tab
3. Click on **Auto Code**
4. Choose **Paragraph styles** from the Auto Code Wizard

5. Click on **Heading 1**
6. Click the << arrows to transfer left
7. Click on the style to be coded - **Heading 2**
8. Click the >> arrows to transfer right
9. Click on **Next**
10. Click the Under field
11. Select Existing Folder
12. Click on Select... next to the Name field
13. Select Cases
14. Click on OK
15. Click on Finish

b. Case organisation - Parent Node

1. Navigate to Cases in the navigator
2. Right click below list of case names
3. Select New Case

4. Add name – Interviewer
5. Repeat steps 1-3 for Interviewee

6. Click on the marker alongside Henry
7. Drag over Interviewer
8. Repeat for Nancy, Linda and Elizabeth

9. Hold CTRL to select all other case names
10. Drag selection over Interviewee

c. Aggregation of data

1. Right click on the Interviewer case
2. Select Aggregate coding from children
   The totals for child sources and references will be displayed.
3. Repeat for the Interviewee case
   This is a toggle option repeat to hide aggregation.
Exercise 17.  

Survey results and other datasets

You cannot edit the contents of a dataset once it is imported.

A dataset contains structured data arranged in columns and rows. One method of creating a new dataset in NVIVO is to import it from a spreadsheet, text file or database file.

a. Bring in survey data

1. Navigate to Data - Files
2. Click the Survey Data folder
3. Click on the Excel button on the Import tab
4. Select Survey data.xlsx
5. Click on Open
6. Confirm the survey wizard settings:
   a. Respondents will be cases
   b. Closed questions have attributes
   c. Open questions are nodes
7. Click on Next
8. Check and confirm:
   • Question headers
   • Date format
   • The worksheet tab for data
9. Click on Next
10. Confirm the destination for dataset cases
11. Indicate the column for a unique identifier for each item
12. Select Create new classification
13. Click on Next

14. Identify data questions type and import status
15. Click on Finish

Survey import results should all be checked
16. Click on Close to display data in details view

Data will display as an internal source and in list view
You cannot sort or filter by the first column. This is NVIVO’s own added reference.
Grey shaded columns are closed ended questions (Classifying data)
White shaded columns are open ended responses (Codable data)

Survey data can be viewed in a table or by individual forms
17. Select the appropriate tab to change the view
b. **Viewing imported Survey Dataset - Nodes**

1. Click on **Nodes** in Navigation Pane
2. Select **Survey Data** under Nodes
   This displays the open ended questions the respondents were asked
3. Double click the first node to display references in **Detail view**
   Remember each Node will open in a new tab

a. **Viewing imported Survey Dataset - Cases**

1. Click on **Nodes** in Navigation Pane
2. Select **Survey Data in Cases**
   This displays each respondent as a case and the references created from their open ended responses
3. Double click a case with 4 references to display references in **Detail view**
   The references will be listed and the original can be displayed
4. Click the source link
5. Click the **Form** tab
   The responses can be viewed in detail.
Querying Data

Exercise 18. Create a Matrix Coding Query

Matrix coding query can easily compare coded material across different demographics or among themes. This can help you see patterns in your data and help you answer questions about your research. We can look at the intersect between nodes and classification attributes.

a. Matrix Query – Do different genders view development differently?

1. Click Query Wizard on the Explore tab
   The Query Wizard opens
   Note: If you choose Matrix Coding you need to create the Matrix Query without the wizard

2. Choose Find coding intersections between two lists of items
3. Click next

4. Click the Add Selected Items... button
   Create a row for each gender value - Female & Male only

5. Click the case classifications text
6. Expand Survey respondents then expand Gender
7. Select Male and Female
   Case nodes represent attributes for people or places in the content

8. Click on OK
9. Click on the Add Attribute Condition... button and select an Attribute if necessary
10. Click Next

11. Click Add Selected Items
11. Select the theme nodes for the Survey Data to cross tabulate in your matrix.
Theme nodes represent coded text in the content
Nodes > Survey Data > Select three questions

12. Click on OK
13. Click Next

14. Search in: Files & Externals
15. Click Next

16. Select Add this Query to Project
17. Select Name and enter name e.g. Matrix Query practice
18. Enter Optional Description if you wish
19. Click on Run
If you click OK you don’t actually query the data.

20. The query results are displayed in the Matrix Query – Results Preview tab in the Details view

21. You can run the query anytime from Search - Queries in the Navigation view pane.
22. To save the query results use Save Results... button on the Matrix Query – Results Preview page (top right)

b. Viewing and amending matrix results

1. Click Matrix Tools – Matrix Tab
2. Select Words Coded

The number of words coded by each gender for each question will be displayed.
3. Double click on any number to see the coded references

4. Select the Matrix Query – Results Preview tab

5. Click the Chart tab at the right side of the screen

Exercise 19.  
‘Word Frequency’ Query

Provides an idea of potential trends at a high level.

1. Go to Explore tab
2. Click on Word Frequency

3. Set parameters for query
   
   Search: Files & Externals
   Display: 50 most frequent words
   Minimum length: 3

4. Click on Run Query on the right
   The results will be displayed. Nvivo has a built in filter to avoid filler words like it, is and that.

5. Click on Add to Project for future use

a. Exclude words in query

1. Right click on east in results list
2. Select Add to Stop Words list

3. Click on OK
4. Re-run the query
b. **Automatic word grouping**

1. Change grouping to **With stemmed words**

2. Re-run the query

c. **Add query to project for reuse**

1. Click the **Add to project** button
2. Enter a name for the query
3. Click on **OK**

4. Navigate to **Search - Queries** and view saved project queries
   
   This is not the results, only the query settings

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**Exercise 20. Create a Word Query**

1. Click on the **Word Cloud** tab, below the **Summary**, at the right of the results list

2. Go to the **Word Frequency Query** tab
3. Select an alternative design

4. Right click on **Word Cloud**
5. Select **Export Word Cloud**
6. Enter a **filename**
7. Click on **Save**

You will have a static image of the word cloud generated from
your text query

a. Single word query

1. In the word cloud, right click on the word “Waters”
2. Select Run Text Search Query for waters
3. Click on the Reference tab to see waters with more context
4. Click on the Word Tree tab.

The word tree groups together words which appear frequently before and after the word water.

b. Word tree query

1. In the Word tree, right click on the word “Quality”
2. Select Run Text Search Query
3. Click on the Summary tab to see where water quality in mentioned in the interviews
4. Click the Reference tab for more context
5. Click on the Word Tree tab to see a new word tree
6. Click on Save Results...
7. Enter a name
8. Click on OK

Be aware the word tree is not retained when you choose Save Results... To display the word tree you have to re-run the query
Visualisation Tools

Exercise 21.

Diagrams

a. Explore diagram

1. Select a Data – File or Case e.g. (Dorothy)

2. Click Explore Diagram on the Explore tab

The diagram appears in details view

3. Click on a surrounding item

4. Click the Change Focus button on the Explore Diagram tab

Use the ribbon to see more connections

5. Click the back button to navigate through the diagram

6. Double click any item to view its content

7. An explore diagram is NOT stored as part of a project. To save the diagram

   - Copy and paste into a memo
     a. Click and drag across image to select all elements
     b. Copy: ctrl C
     c. Click Memo on Create tab
     d. Add a new memo name
     e. Click OK
     f. Paste: ctrl V
• Export as an image
  a. Right click on diagram
  b. Select Export Diagram
  c. Navigate to a location
  d. Click on Save

b. **Comparison diagram**
A comparison diagram lets you compare two of the same type of project items, sources, nodes or cases. The comparison indicates the similarities and differences between items.

1. Click **Comparison Diagram** on the **Explore** tab
2. Select **Compare Cases**
3. Select 2 interview participants
4. Click on OK
   The comparison diagram opens in detail view

   Everything items have in common is in the centre of the diagram. Links to item differences are shown either side of the diagram
5. Double Click any item to open and view content

   Use the tools on the Ribbon to show links you are interested in.
6. An comparison diagram is NOT stored as part of a project. To save the diagram
   • Copy and paste into a memo
     or
   • Export as an image
     (See previous exercise)
**Extension Exercises**

*Memos, annotations and links*

*Memos* are an integral part of the research process. They are like documents or notes that can be linked to other sources or nodes. A memo can be about the entire project or it can link to a specific node or item. *Annotations* in NVIVO are like notes in the margin. *See Also Links* can be used as cross references between related items in your project.

**Exercise 22.  
Create a Memo**

1. Click on **Memo** on the **Create** Tab

2. Enter a **Name** – Couple1
3. Click on **OK**

4. Enter any notes relating to your source
5. Click Close cross on memo tab. NVivo will automatically save whatever you type.

6. Go to **Memos** in Sources
   The new memo will be displayed in list view

**Exercise 23.  
Link a Memo**

To link memos to a source item, go to the source item first. Memos can only be linked to a **single** source item. Anything already linked will be unavailable.

1. Go to **Data - Files**
2. Click on **Maria and Daniel** in interviews
3. Click the **Home** tab
4. Click the **Memo Link** button
5. Select **Link to Existing Memo**

6. Select the **Couple1** memo.
7. Click on **OK**
a. View memo or linked item
   1. Go to Notes - Memos in Sources
   2. Select the memo with the link
   3. Click the Memo Link icon on the home tab
   4. Select Open Linked Item

Exercise 24. Annotations
Annotations are like margin notes you can record comments, reminders or observations. These will display with a blue highlight in the text.

a. Create an Annotation
   1. Open a Data - File interview
   2. Select text to annotate
   3. Go to the Document Tab
   4. Click the New Annotation button
      A number is added at the bottom of the screen for your annotation. Click on this number to navigate to the annotation.
   5. Start typing your annotation
   6. Click into the source content when complete
      Annotated text is highlighted in blue

b. Edit annotations
   1. To see all annotations in a project click Notes – Annotations in the navigator view
   2. In List View: Double click to open a source
   3. Select Click to Edit
   4. In Nodes: Double click to open a node
      All nodes connected to sources will be visible and annotation editing is activated automatically
Exercise 25.  

Adding a “see also” link

A ‘see also’ link is like a cross reference to connect items in an NVivo project. These will display with a pink highlight in the text.

a. Link to an existing source

1. Select text to link from
2. Click Document tab - See Also Link
3. Click New See Also Link...

4. Click the Select button.
5. Navigate to the item to link to

6. Select the item
7. Click on OK
8. Click on OK

The ‘See Also” link will be added and link text will be pink

b. Go to See Also links – in Notes in the Navigator view

1. Right click on the link details
2. Select Open to Item to open the linked item
   Or
   Select Open from Item to open where the link was created