



# Enabling quality qualitative data analysis with evidence through NVivo for interdisciplinary research (Part I)



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# Declaration

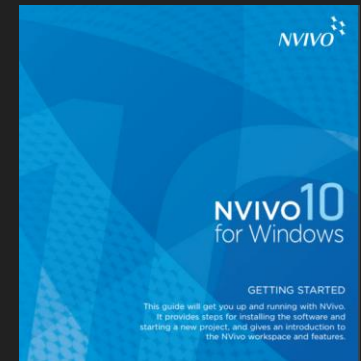
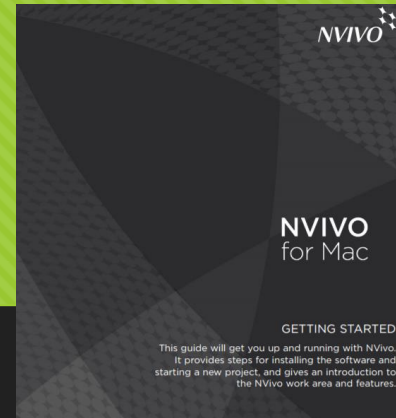
- User of NVivo [sharing experience but not promoting NVivo as the only tool for qualitative analysis]
- Some images with sources are extracted from Google search for educational purpose

# Intended learning outcomes

The workshop is planned for you who are new to NVivo, a qualitative analytic software to acquire fundamental skill in various stages of conducting literature review, collecting data from various stakeholders, data processing and report writing of a research project. The software can process document in PDF, Word and Excel format if you consider to documenting literature (PDF), transcribing interviews (Word) and conducting survey (Excel). In the workshop, you will learn **how to do coding** first with no themes, how to link **related coding** as 'Tree' and 'Nodes' which will form parts of the **emerging themes** with the software.

# Agenda

- Conceptual understanding of qualitative research
- NVivo overview
- Illustration on some basic steps in Nvivo
  - Coding
  - Managing nodes
  - Making queries after coding
- Hands-on practice using NVivo for qualitative research



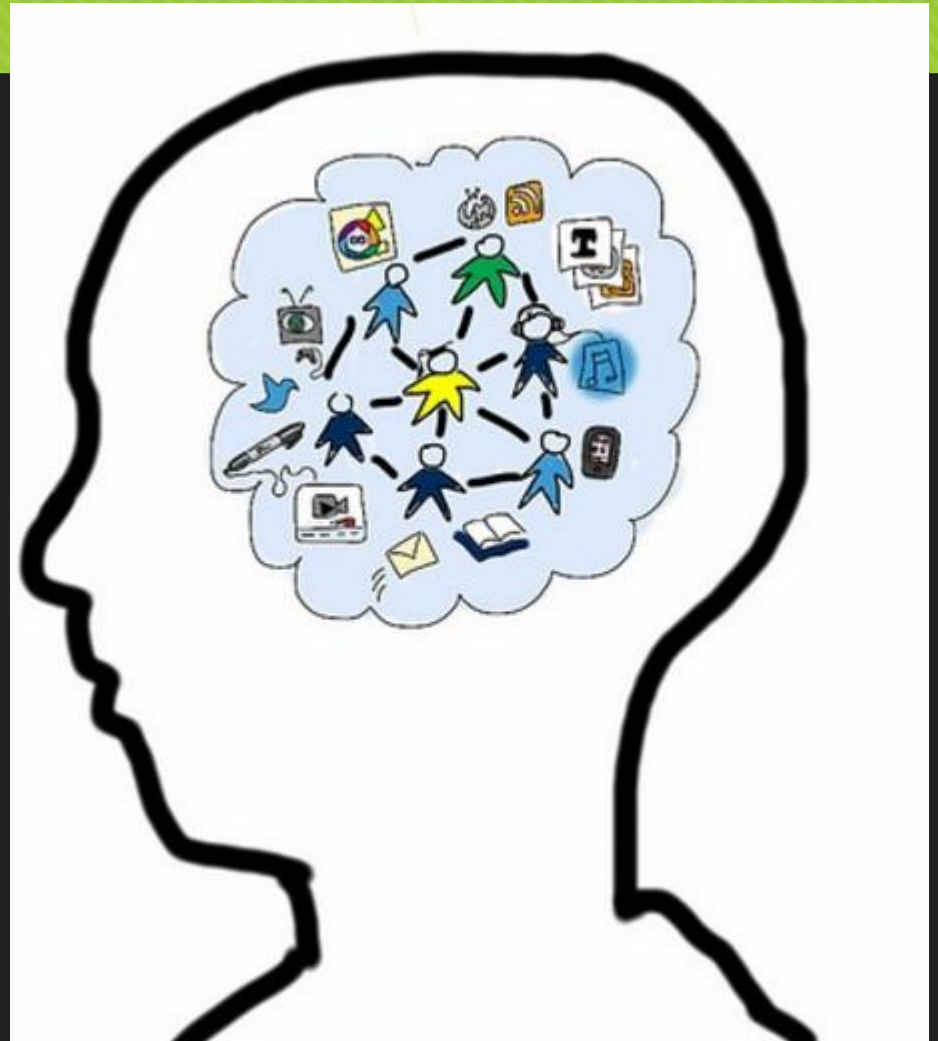


# Educational research

## Research Questions:

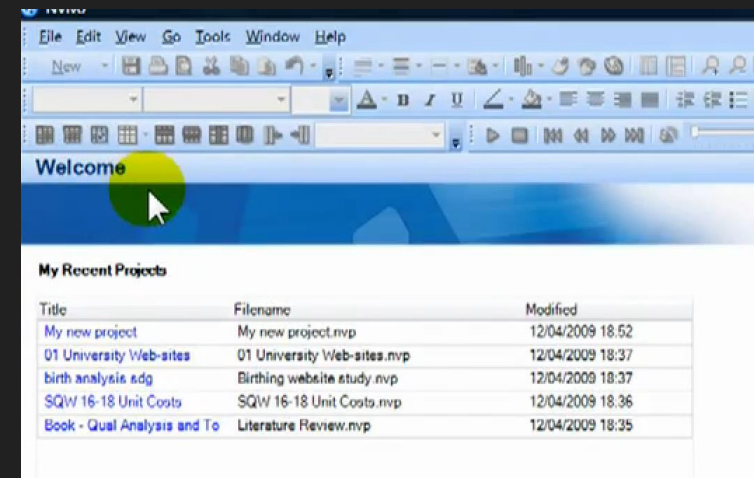
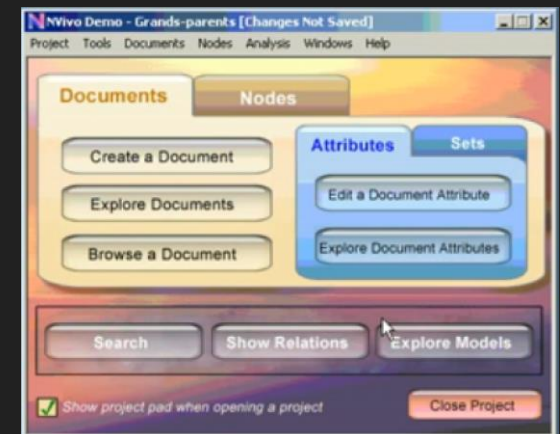
What are the impacts on student learning when they conduct peer assessment?

What are the benefits of adopting flipped classroom in my teaching?



# My experience

- Using Nudist / NVivo for my doctoral study – individual interviews with academics and staff developers from five institutions
  - Coding
  - Queries
  - Retrieving direct quotes as evidence in writing dissertation
- Using NVivo for one of my projects – focus group interviews with students (local and non-local students including mainland students and overseas students) from three institutions
  - Coding
  - Queries
  - Comparing cases



# Your experience

1. Conduct interviews [one-to-one, focus group]
2. Transcribe interviews
3. Code interviewing scripts
4. Make annotations of interviewing scripts
5. Create a summary of interviews
6. Use software for qualitative research



# Quantitative > Qualitative research methods

## Quantitative research

- Hypotheses
- Quantifiable data
- Used for factor analysis, confirming factors, making generalization and prediction
- Significance testing

## Qualitative research

- Case by case
- **Making inquiry (what, how & why)**
- Qualitative data from **a variety of sources and formats**
- Include field observation, interviews (individual / group)
- Narrative account; explanation; phenomena

# Theories in use

## Comparison of Qualitative Analysis Approaches

	General Inductive Approach	Grounded Theory	Discourse Analysis	Phenomenology
Analytic strategies and questions	What are the core meanings evident in the text, relevant to evaluation or research objectives?	To generate or discover theory using open and axial coding and theoretical sampling	Concerned with talk and texts as social practices and their rhetorical or argumentative organization	Seeks to uncover the meaning that lives within experience and to convey felt understanding in words
Outcome of analysis	Themes or categories most relevant to research objectives identified	A theory that includes themes or categories	Multiple meanings of language and text identified and described	A description of lived experiences
Presentation of findings	Description of most important themes	Description of theory that includes core themes	Descriptive account of multiple meanings in text	A coherent story or narrative about the experience



# Defined framework

## Defined framework

- Working on established framework / theories
- RQs
- Methodologies
- Examining sets of data based on **deductive approach**
- Comparing current data with established theories



# Conceptual framework: Example 1

## (Blended learning on part-time degree program)

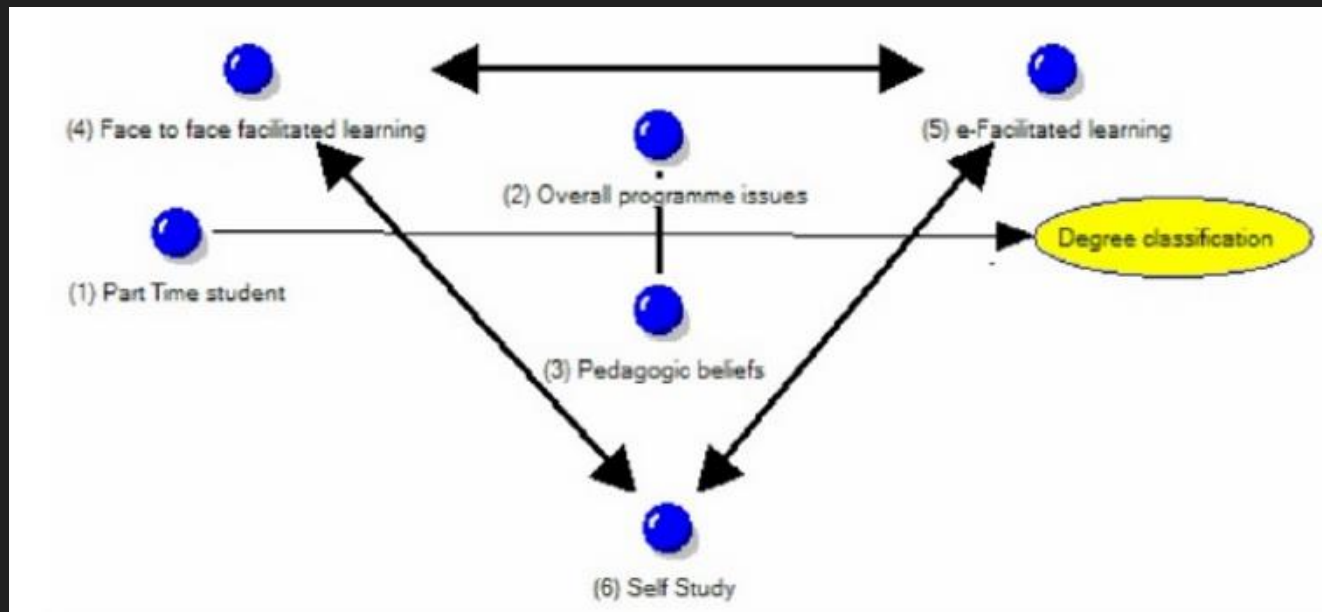
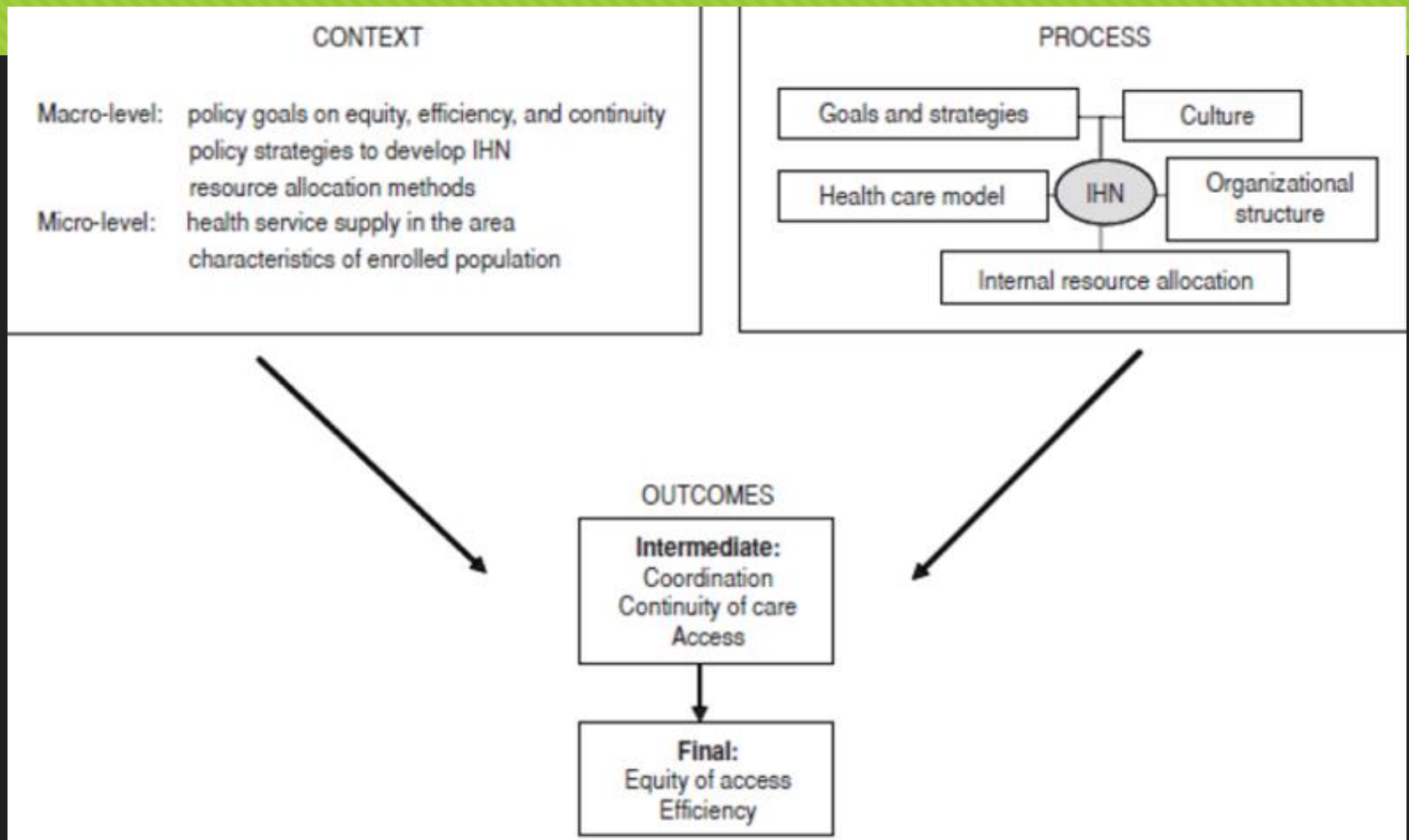


Image source: <http://image.slidesharecdn.com/nvivophdguidenov09v1-091130144353-phpapp01/95/nvivo-use-for-phd-study-18-728.jpg?cb=1259592252>

# Conceptual framework: Example 2

## (Analysis of integrated health care network)





# Data sources

	RQ1	RQ2
Primary source of data	Interview [patient]	Survey [e.g. consumers in district]
Secondary source of data	Report in council	Journal articles

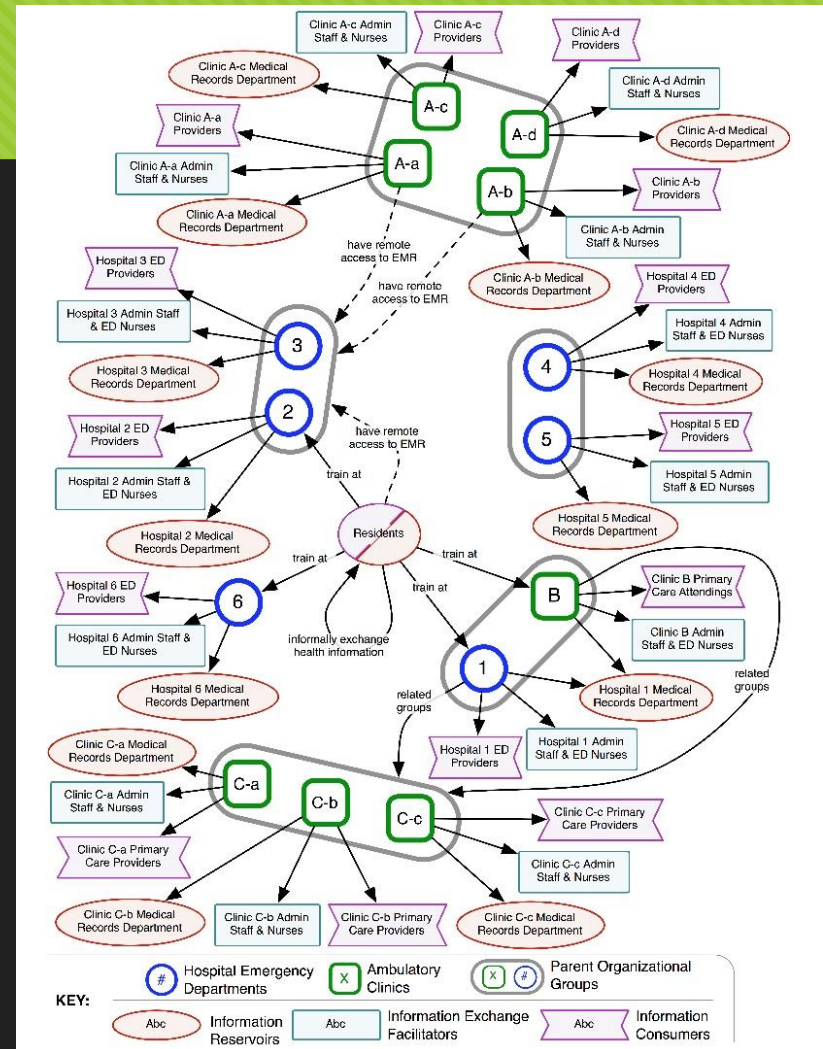


Image source: <https://medinform.jmir.org/2013/1/e3/>

# Grounded theory

**Coding** and **memo-making** from  
relevant empirical data (Glaser and Strauss, 1967)

Glaser, B.G., & Strauss, A.L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New York: Aldine de Gruyter.

# What is coding?

- Decoding **micro-meaning** from **text**  
[primary and secondary data]
- Identifying **patterns** of ideations, beliefs and behaviour
- **Conceptualization**

# Coding from script

## Coding labels

Professional  
role

Place & Space

Place & Space;  
Patient  
experience

Primary-  
secondary care

Quality of care

Technology

## Participant 31: General Practitioner 5

154 I think, sometimes, I think again paediatrics has more in common  
155 with General Practice than most specialties, but obviously in General  
156 Practice you're looking at the whole person, not just the disease and  
157 obviously the good quality Paediatrician does that and if you're  
158 seeing people nearer to their home setting, then you can see, you  
159 know an outpatient department is a bit remote and I'm not saying  
160 it's inhumane but if you are in a setting you're comfortable in,  
161 you're going to be more relaxed, you might be more honest and  
162 open and give better quality answers particularly if there are social  
163 issues. It would be good for consultants to be, you know recognised  
164 in a certain area and I think they would appreciate that as well. So  
165 no I think, obviously ways in which care could deteriorate are in  
166 terms of records because obviously if the consultant doesn't have  
167 the notes, that's a disaster, so I don't know what the IT set up would  
168 be like, that would, you know obviously if the consultant can access  
169 notes remotely whatever you're planning, that would be very, very  
170 important.

# Coding from script to theory

## TEXT

Man #3: And that's when I thought it was weird.  
Woman #2: Are you saying that's the first time you noticed? Really? Child #2: Where's my ketchup? Man #1: What's wrong with him not noticing? It's just a small thing. Woman #2: I think it's kind of small, but also kind of big. Me: It's important to realize any differences that exist. Man #4: I agree that it's not small at all, it's really, really important. Woman #1: What are we talking about again? Child #1: I like ponies. Man #5: If you all think that's important, what about the different ones? Woman #3: What different ones? I can't think of anything else. Man #5: You know, the ones that stick to the side. Man #3: And that's when I thought it was weird. Woman #2: Are you saying that's the first time you noticed? Really? Child #2: Where's my ketchup? Man #1: What's wrong with him not noticing? It's just a small thing. Woman #2: I think it's kind of small, but also kind of big. Me: It's important to realize any differences that exist. Man #4: I agree that it's not small at all, it's really, really important. Woman #1: What are we talking about again? Child #1: I like ponies. Man #5: If you all think that's important, what about the different ones? Woman #3: What different ones? I can't think of anything else. Man #5: You know, the ones that stick to the side.

## CODE

code code  
code code  
code code  
code code  
code code  
code code  
code code  
code code  
code code

## CATEGORY

category  
  
category  
  
category

## THEORY



# Defined/**Open** framework

Deductive Reasoning

EXPERIMENT



Predictions



THEORY

Defined framework

- Working on established framework / theories
- RQs
- Methodologies
- Examining sets of data based on **deductive approach**
- Comparing current data with established theories

Inductive Reasoning

OBSERVATION



Generalizations



PARADIGM

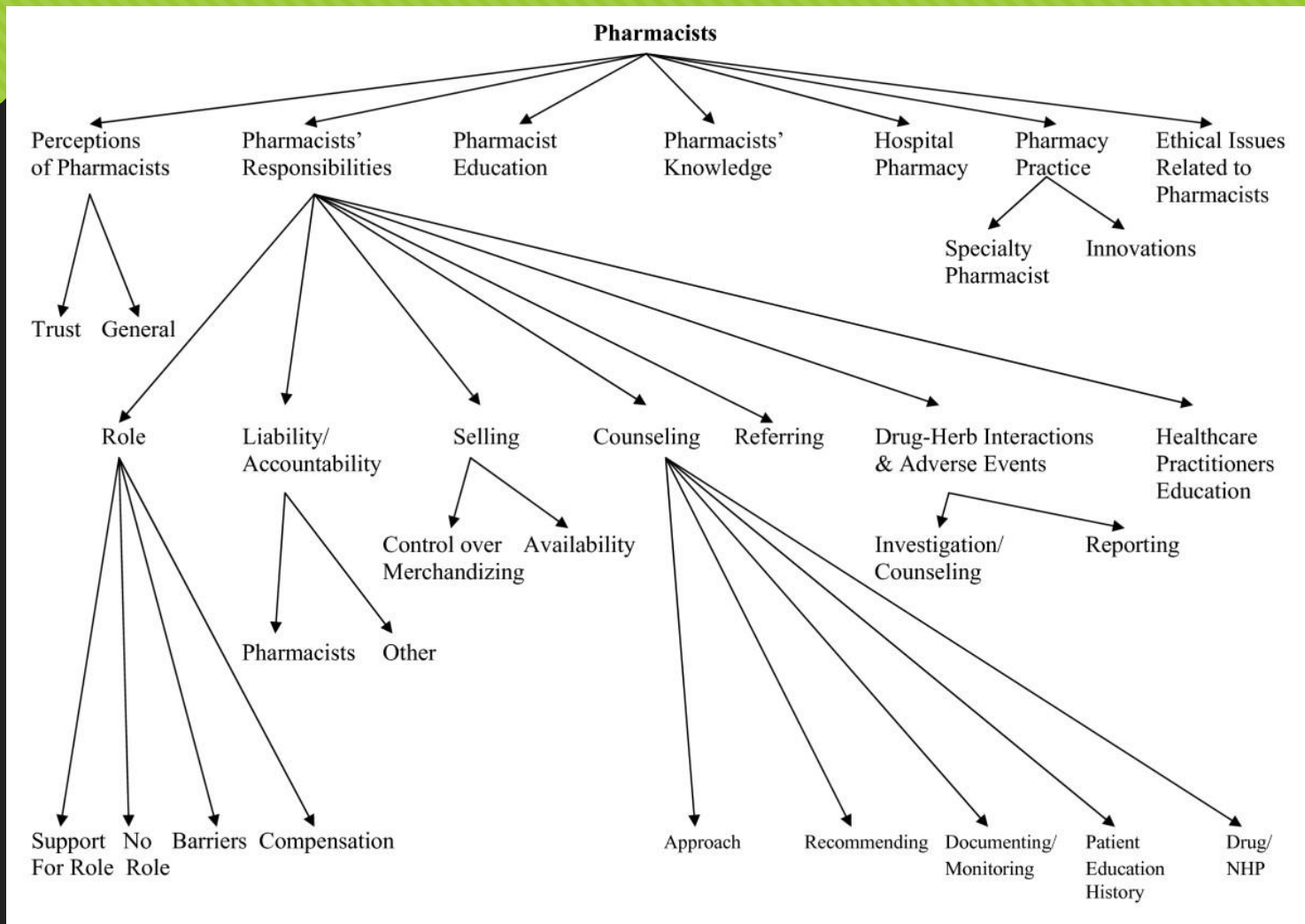
**Open framework**

- Exploring emerging theories
- RQs
- Methodologies
- Developing a set of codes purely based on **inductive approach**
- Identifying emerging issues or framework for further research



# Exploratory study: an example

Pharmacist  
coding tree  
[47 full-time/  
part-time  
pharmacists  
using NVivo  
for analysis]



# Exercise: Generating sub-themes in an interview (1)



Think about  
sub-themes  
relating to  
the interview

Credit: [https://www.youtube.com/watch?v=qeN\\_n\\_ytbMg&feature=youtu.be](https://www.youtube.com/watch?v=qeN_n_ytbMg&feature=youtu.be)



# Exercise: Generating sub-themes in an interview (2)

## ○ **Keywords**

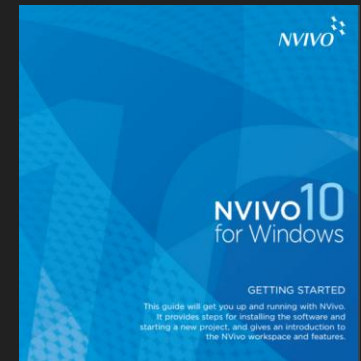
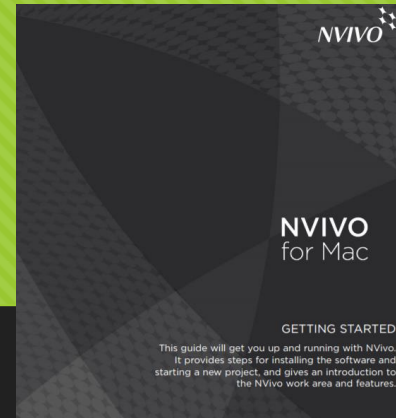
- Exchange programmes
- International students
- ...

## ○ **Categories**

- Experience [DO; impact]
- Satisfaction [FEEL]
- Implication [Prediction; policy review]
- ...
  
- Depending in the context of disciplines and research questions

# Agenda

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- **NVivo overview**
- **Illustration on some basic steps in NVivo**
  - **Coding**
  - **Managing nodes**
  - **Making queries after coding**
- Hands-on practice using NVivo for qualitative research



# NVivo: a tool to support organization and analysis of data



# Working in qualitative research: Managing messy and massive data

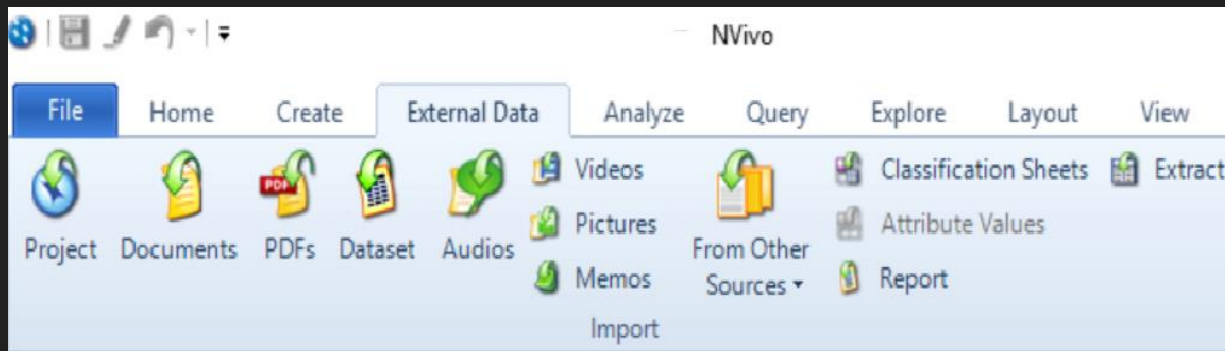
# Note about using NVivo

- PC & Mac
- Version 10; Version 11 [starter, professional, plus]
- Project created from different platforms may **not** be transposed

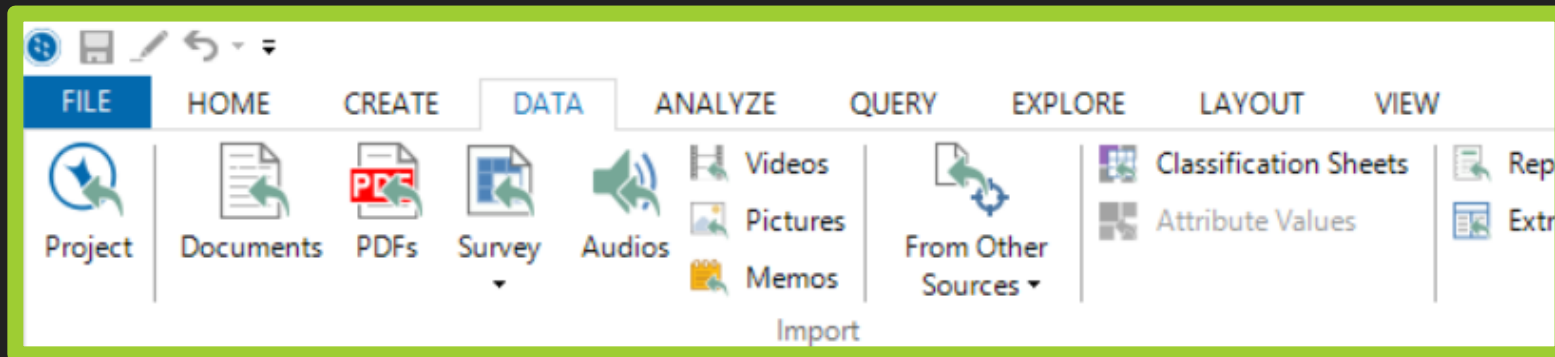
[[http://help-nv11mac.qsrinternational.com/desktop/deep\\_concepts/work\\_with\\_your\\_projects\\_on\\_windows\\_or\\_mac.htm#MiniTOCBookmark6](http://help-nv11mac.qsrinternational.com/desktop/deep_concepts/work_with_your_projects_on_windows_or_mac.htm#MiniTOCBookmark6)]

# NVivo 10 & 11 (PC)

## NVivo 10

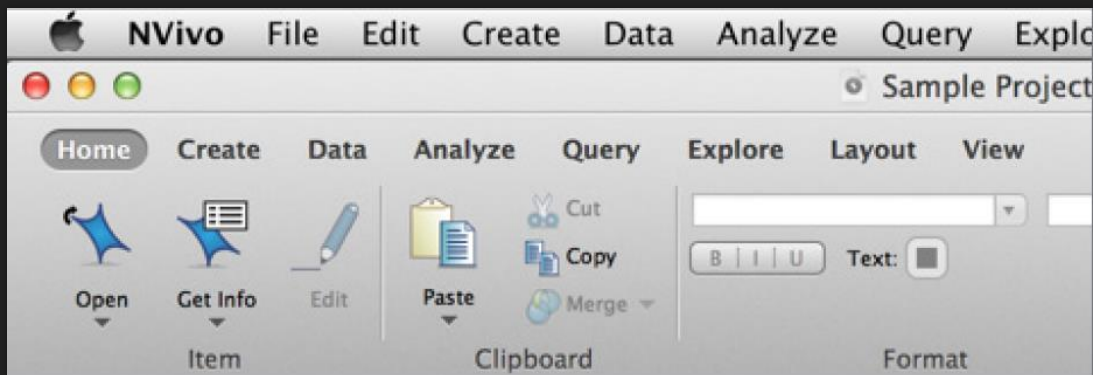


## NVivo 11 Pro

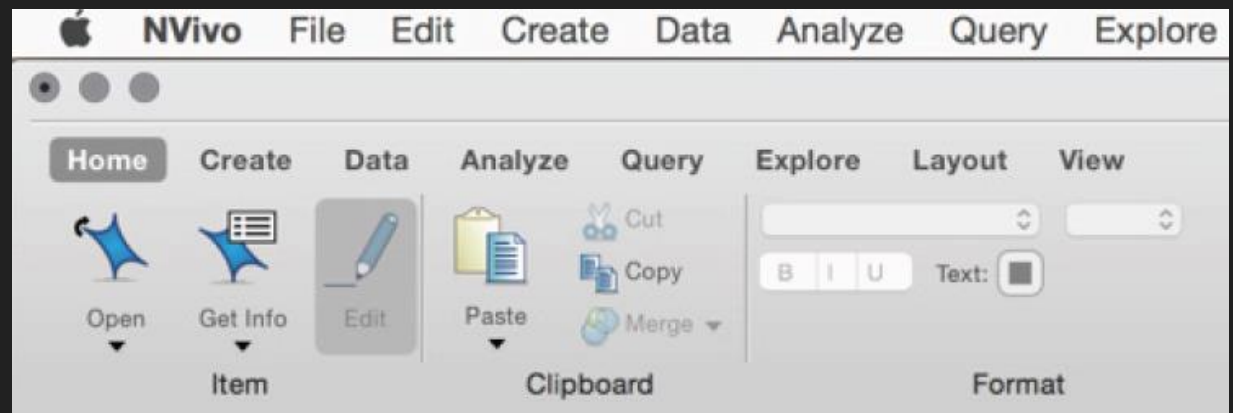


# NVivo 10 & 11 (Mac)

## NVivo 10



## NVivo 11



# NVivo overview



- Importing data

- [<https://goo.gl/sbPDx5>] importing document
- [<https://goo.gl/zPSKxK>] importing dataset [check whether column as classifying field or codable field]



# Import a file [Word/Excel/PDF]

## Word

I: expectations developing skills and knowledge on caring of patients through simulation.

Q: are resources provided enough?

S1: there are a lot of references but did not read all of them; **read the key information** sheet only

S2: the teacher provided additional web resource and I have **read them**. They are relevant in SPS. It is very clear to me about **brain attack with thrombolytic therapy**

S3: have NOT read the web references, but have **read the key information** particularly I am not sure what role that I will play

S4: have not read the information provided; but read references that I had gotten a part of related cares of the case. Certainly need to prepare before attending SPS.

## Excel

ID	g...	...	level_of...	coun...	body
1	m	29	b	AU	I wonder how far the law should go to protect against the snooping media, I have been shocked at how wide spread the phone hacking story has reached in the UK.
2	m	29	b	AU	Question is this: where can a 100 year old egg be obtained? sort of like a chinese delicacy and have proven very hard to obtain in my experience. they're very yummy and have only got some in a food court and once in a private residence, and at a restaurant that couldn't get next time (vague)
3	m	29	b	AU	> Have you ever posted any "newsworthy" information that helped someone > beyond your social circle, for instance? Have you ever benefited from > the information from someone you don't personally know? Have you ever > relayed certain information (by re-sharing, re-tweeting, etc) to > others who have told you later that they benefited from the > information you relayed? if your car gets egged, wash it with a bit of water instead of letting it just dry and having the folic acid or whatever super nutrients eat at the paint which means nothing by now

# Content analysis

## Manifest

- Component
- Words [language used] with high frequency

## Latent

- Interpretation of **underlying** meaning of the text

# Raw data (primary / secondary data)

## Research questions

- Sampling ~ 10%
- Selected sampling after initial filtering (wrt RQs)
- Bold the central idea from a sentence [without preconceived sub-themes / categories]

# Coding (1)

- Starting from Node [Grounded theory]

- **Creating Node**

- Select content > right click > new node

- <https://www.youtube.com/watch?v=idv9tILvgWc>

- **Converting Nodes to Parent Nodes and Child Nodes**

- [linking: related, lead to, caused from]

- [contrasting, differentiating]

- Copy a node to tree node / child node

- <https://www.youtube.com/watch?v=4crQbeHKhtk>

- Starting from a **framework/theories**

- Creating a tree node with child node relating to the framework

- Select content > select the designated nodes

# Coding (2)

## Coding unit

- Ideas
- **Keywords [text search and save as nodes]**
  - Health information
  - Digital behaviour
  - Organizational culture
- A phrase [from source]
- Nodes

## Coding scheme

- Categories [What]/  
Themes [How: behavioral patterns; processes; capabilities] through aggregation of commonality

## Cases

- Stakeholders [individuals, age-groups, gender]; categorized sectors; geographical locations

# Coding – Drag and drop

The screenshot displays the NVivo software interface for a project named 'Sample Project.nvp'. The 'Nodes' list on the left contains the following items:

- Nodes
- Relationships
- Node Matrices

The main window shows a table of nodes with the following data:

Name	Sources	References	Created On	Created By	Modified On	Modified By
Real estate development	28	356	16-May-10 3:38 AM	WWS	10-May-12 12:40 PM	WWS
Economy	25	303	16-May-10 3:38 AM	WWS	16-Mar-11 11:16 AM	WWS
Natural environment	24	325	16-May-10 3:39 AM	WWS	10-May-12 10:20 AM	WWS
Community	18	101	16-May-10 3:38 AM	WWS	26-Aug-10 12:18 PM	WWS
Attitude	17	992	16-May-10 4:05 AM	WWS	30-Jun-10 5:31 AM	WWS
Policy, management	14	38	16-Jun-10 2:47 AM	HGP	10-May-12 12:12 PM	WWS
Balance	6	16	17-May-10 10:57 PM	WWS	30-Aug-10 2:14 PM	WWS
Memorabl	5	16	01-Jun-10 7:47 PM	EDR	22-Jul-10 10:22 PM	WWS

A red arrow points from the 'Balance' node in the Nodes list to the interview transcript. The transcript is titled 'Interview Guide' and 'Change in Coastal Communities: Perspectives from Down East'. It contains two sections of questions:

**Q.1. Connection to Down East**

- How long have you or your family been living Down East? [# of years and/or generations]
- Multigenerational resident:
  - Do you currently live on inherited family land?
  - What is it about this place/Down East that keeps you living here, or led you to return here?
- First-generation resident:
  - What attracted you to live here or return here?
- Are there things about Down East that make it unique, different from other places?
- How would you describe your lifestyle here?
- What are some things you particularly enjoy doing or experiencing here?
- Are there particular places Down East that are important to you? What are they?

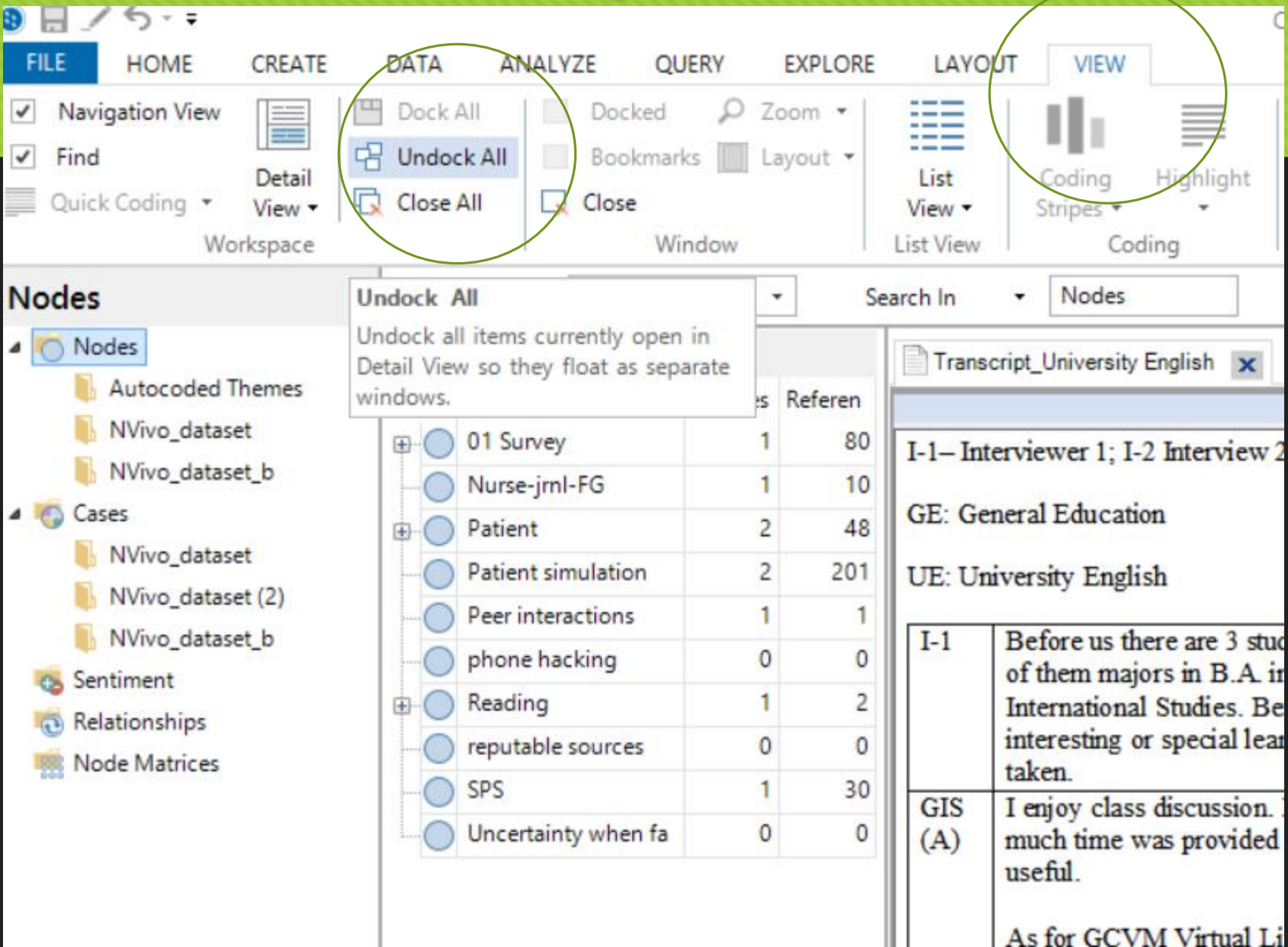
**Q.2. Connection to Down East natural environment**

If, in the previous questions of this section, they have not mentioned the natural environment:

- What do you think about the natural environment/landscape Down East?
- Are there things you particularly like/hate about the environment here?



# Before Coding – Undock All



The screenshot shows the NVivo software interface. The ribbon at the top includes tabs for FILE, HOME, CREATE, DATA, ANALYZE, QUERY, EXPLORE, LAYOUT, and VIEW. The 'VIEW' tab is active, and the 'Undock All' button is circled in green. Below the ribbon, the 'Nodes' panel on the left shows a tree view of the project structure. The main workspace displays a list of nodes and their associated data. A tooltip for the 'Undock All' button is visible, explaining its function.

**Undock All**  
Undock all items currently open in Detail View so they float as separate windows.

+	01 Survey	1	80		
	Nurse-jrnl-FG	1	10		
+	Patient	2	48		
	Patient simulation	2	201		
	Peer interactions	1	1		
	phone hacking	0	0		
+	Reading	1	2		
	reputable sources	0	0		
	SPS	1	30		
	Uncertainty when fa	0	0		

Transcript\_University English

I-1– Interviewer 1; I-2 Interview 2

GE: General Education

UE: University English

I-1	Before us there are 3 stud of them majors in B.A in International Studies. Be interesting or special lear taken.
GIS (A)	I enjoy class discussion. much time was provided useful.
	As for GCVN Virtual Li

# Coding with full screen

The screenshot displays a software interface with a green header and a white main area. The top menu bar includes 'DATA', 'ANALYZE', 'QUERY', 'EXPLORE', 'LAYOUT', and 'VIEW'. Below the menu, there are various toolbars and panels. On the left, a 'Nodes' panel lists items like '01 Survey', 'Nurse-jrnl-FG', 'Patient', 'Patient simulation', 'Peer interactions', 'phone hacking', 'Reading', 'reputable sources', 'SPS', and 'Uncertainty when facing tasks'. The central window, titled 'Transcript\_University English', shows a transcript with a table of data. The table has two columns: 'I-1' and 'GIS (A)'. The 'I-1' column contains text about students and their majors. The 'GIS (A)' column contains text about class discussion and reflection. The interface also includes a 'Workspace' section with 'Navigation View', 'Find', and 'Quick Coding' options, and a 'Visualization' section with 'Color Scheme' and 'Window' options.

DATA ANALYZE QUERY EXPLORE LAYOUT VIEW

Dock All Undock All Close All Window

Look for

Nodes

- Name
- 01 Survey
- Nurse-jrnl-FG
- Patient
- Patient simulation
- Peer interactions
- phone hacking
- Reading
- reputable sources
- SPS
- Uncertainty when facing tasks

Transcript\_University English

FILE HOME CREATE DATA ANALYZE QUERY EXPLORE LAYOUT VIEW

Navigation View Find Quick Coding Workspace

Dock All Undock All Close All

Window List Coding Links Detail Reference Color Scheme Visualization

I-1– Interviewer 1; I-2 Interview 2; A – Student GIS (A); B – Student BA Eng; C – Student GIS (B)

GE: General Education

UE: University English

I-1	Before us there are 3 students, among whom there are 2 male students and 1 female student. One of them majors in B.A. in English while the rest of the two major in Government and International Studies. Before discussing the UE courses, please share with us if there is any interesting or special learning experience that impresses you in those 7 to 9 GE courses you have taken.
GIS (A)	<p>I enjoy class discussion. For example, in University English I and II taught by the same lecturer, much time was provided for me to discuss with classmates in English. The courses have been useful.</p> <p>As for GCVM Virtual Living in a Virtual World, much <b>time was given also for reflection and discussion.</b> Thus the course has been useful and inspiring.</p> <p>Another course I would like to talk about is Public Speaking. I learnt a lot when preparing for speech materials. It's good that we could express our opinions during the lessons.</p>



# Coding script in table

Look for
Search In
Nodes
Find Now
Clear
Advanced Find

## Nodes

Name	Sources	References
01 Survey	1	80
Nurse-jrnl-FG	1	10
Patient	2	48
Patient simul	2	201
Peer interacti	2	2
phone hackin	0	0
Reading	1	2
reputable sou	0	0
SPS	1	30
Uncertainty w	0	0

☒ Peer interactions

[<Internals\\Transcript nursing PH unbold>](#) - 5 1 reference coded [0.30% Coverage]

Reference 1 - 0.30% Coverage

met in the morning with team members (Preparation)

[<Internals\\Transcript University English>](#) - 5 1 reference coded [0.20% Coverage]

Reference 1 - 0.20% Coverage

GIS (A)

I enjoy class discussion. For example, in University English I and II taught by the same lecturer, much time was provided for me to discuss with classmates in English. The courses have been useful.

As for GCVM Virtual Living in a Virtual World, much **time was given also for reflection and discussion.** Thus the course has been useful and inspiring.

Another course I would like to talk about is Public Speaking. I learnt a lot when preparing for speech materials. It's good that we could express our opinions during the lessons.

Drag selection here to code to a new node

# Coding PDF (text)

○ By text

The screenshot shows a PDF annotation software interface. The top menu bar includes Home, Create, External Data, Analyze, Query, Explore, Layout, and View. Below the menu is a toolbar with various icons for editing and searching. A search bar is visible with the text 'Look for' and 'Search in' set to 'Nodes'. Below the search bar is a table titled 'Nodes' with columns: Name, Sources, References, Created On, Created By, and Modified On.

Name	Sources	References	Created On	Created By	Modified On
Natural Environment	1	1	8/22/2012 1:34 PM	SRJ	8/22/2012 1:34 PM
Water Quality	1	1	8/22/2012 1:35 PM	SRJ	8/22/2012 7:33 PM

Below the table is a document viewer showing a PDF titled 'Estuary economics exec'. The document contains a photograph of a bird standing in water, a quote, and a section titled 'VALUE OF COASTS AND ESTUARIES: What's At Stake?'. The 'Executive Summary' section by Linwood Pendleton discusses the importance of coasts and estuaries and the impact of human activities. The text is highlighted in yellow, indicating it has been coded.

*"America's oceans and coasts are priceless assets. Indispensable to life itself, they also contribute significantly to our prosperity and overall quality of life."*

## VALUE OF COASTS AND ESTUARIES: What's At Stake?

### Executive Summary

*By Linwood Pendleton*

Our nation was built from the coast. Americans, like people around the world, are drawn to the coast because of its beauty, productivity, and because our coasts are gateways to the world. The coast nurtures our frontier spirit, our need for outdoor recreation, and the constant American appetite for sweeping ocean views and quiet bayfront vistas. Coasts, coastal oceans, and estuaries are essential to ocean fisheries and aquaculture. Coasts and their waters also generate oxygen, sequester carbon dioxide, and provide habitat to plants and animals both marine and terrestrial.

Unfortunately, we have a poor track record when it comes to taking care of our coasts and estuaries. Years of badly planned coastal housing have lead to heroic, and sometimes desperate, measures to hold back the forces of nature by using engineering rather than ecological stewardship. Seawalls have transformed once natural coasts into marine hazards unfit for the basic activities that first drew homeowners to the sea – swimming, boating, and fishing. Estuaries too have been under siege. Bays once filled with fish and oysters have become dead zones filled with excess nutrients, chemical wastes, and harmful algae. Wetlands, especially coastal salt

Source: [https://www.youtube.com/watch?v=fB\\_Gsmfmr7U](https://www.youtube.com/watch?v=fB_Gsmfmr7U)

# Coding PDF (Region)

○ By region

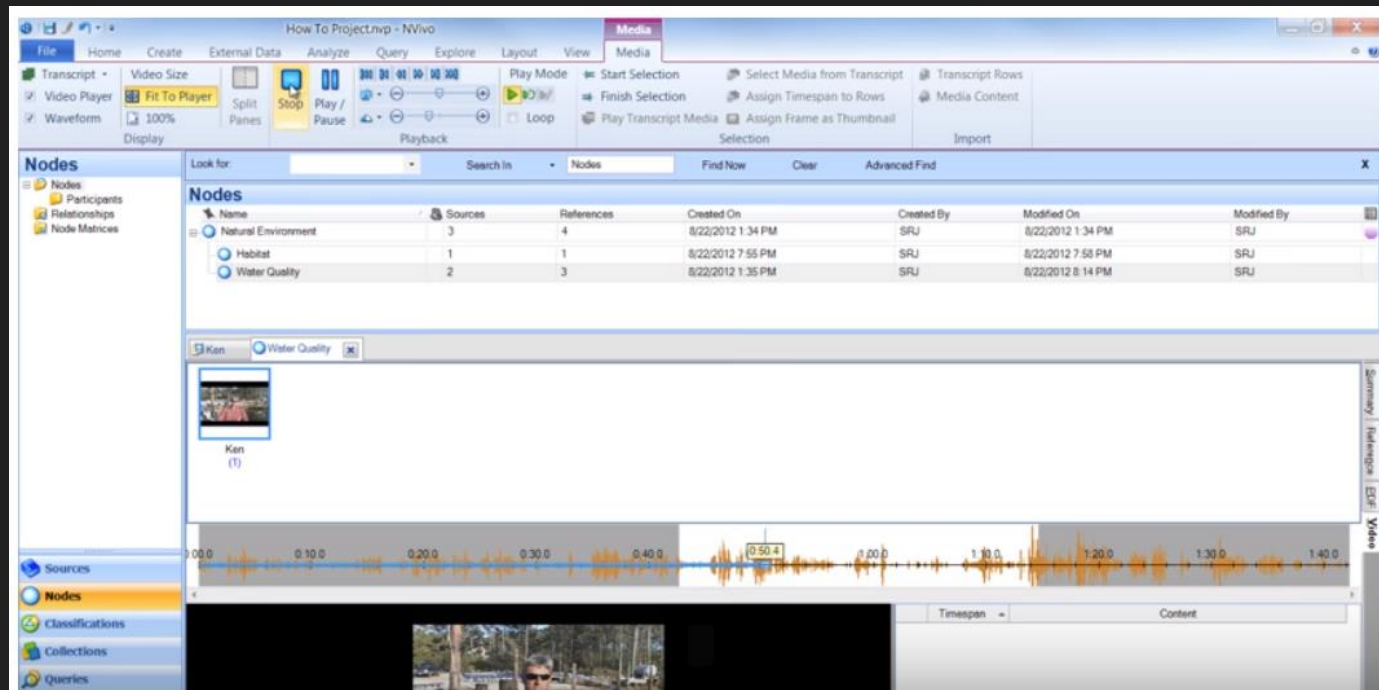
The screenshot shows a software interface with a menu bar (Home, Create, External Data, Analyze, Query, Explore, Layout, View) and a toolbar with various icons. A search bar is visible with the text 'Look for' and 'Search In' set to 'Nodes'. Below the search bar, a table titled 'Nodes' lists two items: 'Natural Environment' and 'Water Quality', each with a count of 1 source and 1 reference, and a creation date of 8/22/2012. The main window displays a PDF document titled 'Estuary economics exec'. The PDF text discusses the economic contribution of recreational fishing and coastal wildlife viewing. A table titled 'Table 1: Estimated Annual Value of Selected Coastal Recreation (millions of US\$)' is embedded in the PDF. The table has columns for 'Beach Going', 'Recreational Fishing', and 'Wildlife Viewing', each with 'Low' and 'High' estimates. The rows represent different U.S. regions: Far-Western U.S., Western Continental U.S., Gulf-shore Southern U.S., Southeastern U.S., Northeastern U.S., and a U.S. Total. A note at the bottom of the table states: 'Note, some double counting may occur when adding across states, but this double counting is likely to be a small compared to estimation error. More serious double counting could occur when adding values across different recreational activity types.'

	Beach Going		Recreational Fishing		Wildlife Viewing	
	Low	High	Low	High	Low	High
Far-Western U.S.	\$218	\$653	\$800	\$3,866	\$463	\$4,633
Western Continental U.S.	\$1,845	\$9,226	\$687	\$2,750	\$957	\$9,574
Gulf-shore Southern U.S.	\$1,185	\$11,848	\$5,645	\$9,408	\$1,151	\$11,508
Southeastern U.S.	\$1,769	\$4,424	\$1,632	\$2,720	\$645	\$6,449
Northeastern U.S.	\$933	\$3,732	\$1,109	\$7,393	\$1,661	\$16,606
U.S. Total*	\$5,950	\$29,883	\$9,873	\$26,136	\$4,877	\$48,770

\*Note, some double counting may occur when adding across states, but this double counting is likely to be a small compared to estimation error. More serious double counting could occur when adding values across different recreational activity types.

Source: [https://www.youtube.com/watch?v=fB\\_Gsmfmr7U](https://www.youtube.com/watch?v=fB_Gsmfmr7U)

# Coding video



Source:  
<https://www.youtube.com/watch?v=5MKf6DeJAb0>

# Coding technique

- Code at an existing node
- Drag and drop coding
- Code at a new node
- Using the Quick Coding bar
- **Code results from queries**
- Using nicknames to speed up coding
- Make a node from selected text (In Vivo code)

Credit:

[http://help-nv10.qsrinternational.com/desktop/procedures/more\\_manual\\_coding\\_techniques.htm](http://help-nv10.qsrinternational.com/desktop/procedures/more_manual_coding_techniques.htm) [PC]

[http://help-nv10mac.qsrinternational.com/desktop/procedures/more\\_manual\\_coding\\_techniques.htm](http://help-nv10mac.qsrinternational.com/desktop/procedures/more_manual_coding_techniques.htm) [Mac]

# Coding strategies

- Keeping coding strips on
- Doing a pilot with a few scripts
- Reviewing the coding system; avoiding many coding on the same script – keeping the dominant themes
- Inserting brief description about a node, example and exclusion – important when work with more than one coders
- Making annotation in text where necessary



# Making annotation [the document] (Ctrl+Shift+Key 'A')



Transcript\_nursing\_PH\_unbold Passive action

Click to edit

**Q 2: any meeting between peers before and doing SPS**  
First batch

**S1: visited the lab and know what kind of equipment is available. Just briefly met in the morning with team members (Preparation)**

Annotations

Item	Content
1	Control + Shift + Key A Preparation

# Coding by categories

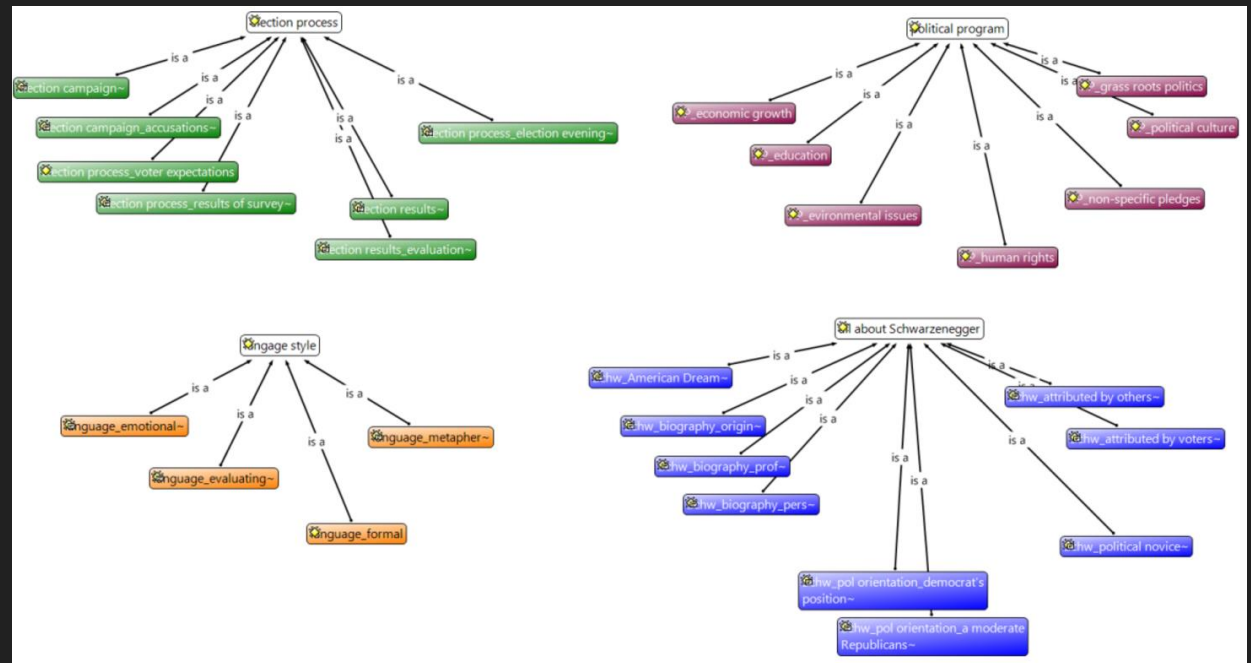


Image source:

[http://www.quarc.de/fileadmin/downloads/figures/Figure%207.26\\_%20Developing%20categories%20in%20the%20form%20of%20hierachical%20trees.png](http://www.quarc.de/fileadmin/downloads/figures/Figure%207.26_%20Developing%20categories%20in%20the%20form%20of%20hierachical%20trees.png)

# Categorization example (1)

Theme	LACK OF CONTROL AND STRUGGLE FOR REGAINING CONTROL					
Category	SENSATIONS			ACTIONS		COGNITIONS
Sub-category	Unfamiliar bodily sensations	Familiar but unexpected bodily sensations	Terrible feelings	Unfamiliar actions	Familiar but unexpected actions	Thinking difficulties
Codes	Double vision Emptiness in the head Emptiness in the stomach Stiffness in the tongue Unsteadiness Weightiness in the legs	Enormous hunger Palpitations of the heart Tremor Sweating	Frightened to death Loss of control Uncertainty Confusion	Fumbling Disconnected speech Disruptive behaviour	Urge to eat Verbal expressions of anger “Attack” on the refrigerator	Inability to think clearly Uncertainty of what to say Unawareness of surroundings

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse education today*, 24(2), 105-112.

# Categorization example (2)

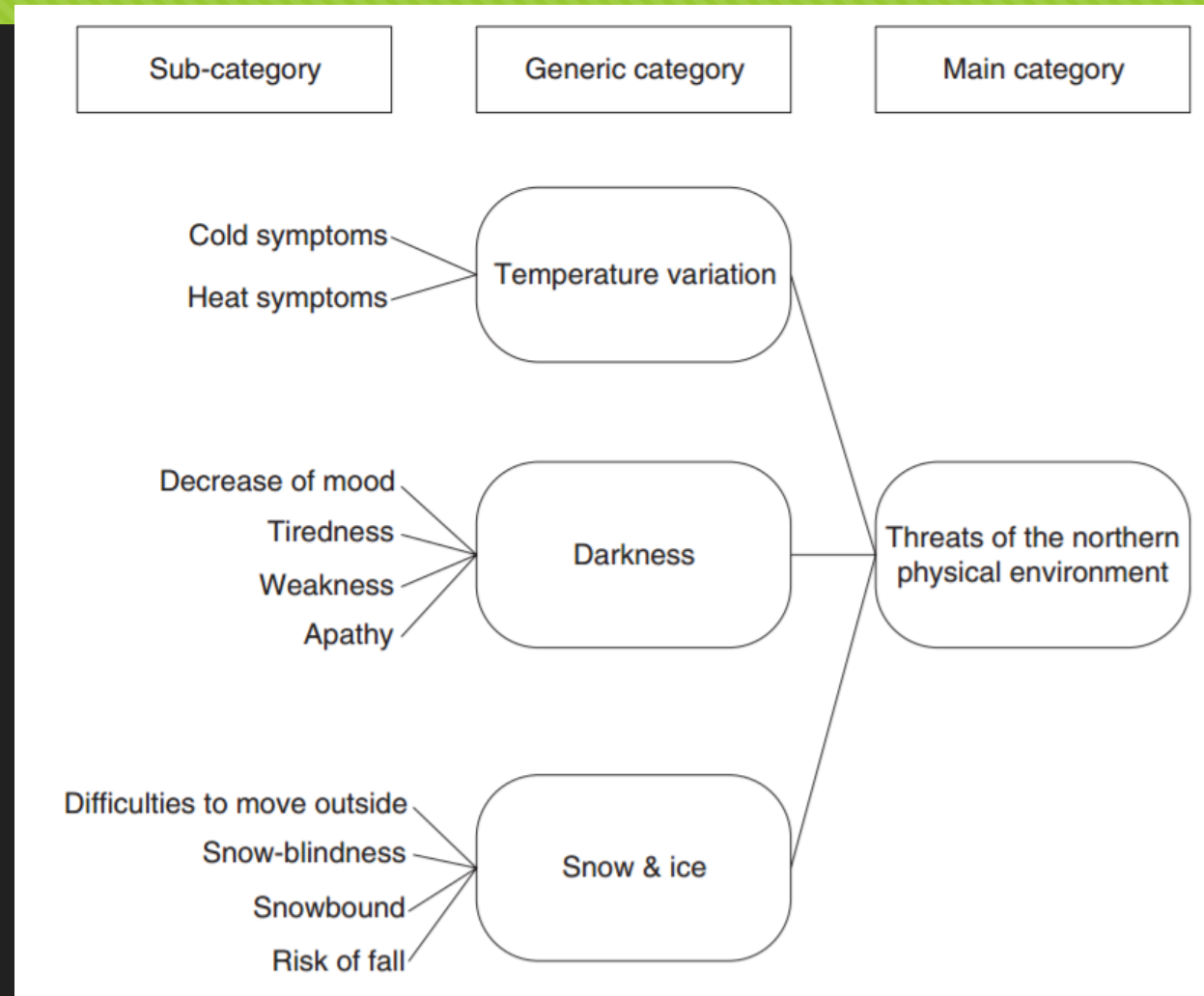


Image source:  
[https://www.researchgate.net/profile/Satu\\_Elo/publication/54993999\\_The\\_qualitative\\_content\\_analysis/links/02bfe5112a36ee6e8a000000.pdf](https://www.researchgate.net/profile/Satu_Elo/publication/54993999_The_qualitative_content_analysis/links/02bfe5112a36ee6e8a000000.pdf)

# Managing nodes (1)

## Organization of nodes

- Drag and drop
  - Form Child node
- Rename
- Delete

The screenshot displays the NVivo Plus software interface. The top menu bar includes FILE, HOME, CREATE, DATA, ANALYZE, QUERY, EXPLORE, LAYOUT, and VIEW. Below the menu is a toolbar with various icons for workspace, item, clipboard, format, paragraph, styles, and editing. The main window is divided into two panes. The left pane, titled 'Nodes', shows a hierarchical tree structure with categories like Autocoded Themes, Cases, Relationships, and Node Matrices. The right pane, also titled 'Nodes', displays a table of nodes with columns for Name, Sources, References, Created By, and Created On. A context menu is open over the 'real patients' node, showing options such as New Node..., Open Node..., Export, Print, Cut, Copy, Paste, Merge Into Selected Node..., Merge Into New Child Node..., Delete, Auto Code..., Memo Link, Expand/Collapse, Move Up, Move Down, Create As, Add To Set..., Visualize, Node Properties..., Color, and Aggregate Coding from Child Nodes.

Name	Sources	References	Created By	Created On
helpful course teaching		0	CI	1/18/2017 11:51 AM
Interview question		0	PH	1/18/2017 3:52 PM
Nurse-jrnl-FG		1	PH	1/17/2017 5:29 PM
Patient		2	PH	1/17/2017 4:49 PM
REAL patient		1	PH	1/17/2017 4:53 PM
real patients		4	CI	1/18/2017 11:51 AM
simulated patient		1	PH	1/17/2017 5:00 PM
Patient simulation		201	PH	1/17/2017 7:11 PM
Peer interactions		1	PH	1/17/2017 4:28 PM
phone hacking		0	PH	1/18/2017 12:03 PM
Reading		2	PH	1/17/2017 4:23 PM
reputable sources		0	PH	1/18/2017 12:29 PM
SPS		30	CI	1/18/2017 11:51 AM
Student responses		0	PH	1/18/2017 3:50 PM
Uncertainty when facing tasks		0	CI	1/18/2017 11:51 AM

# Managing nodes (2)

## Merging nodes

- Cut the node
- Merge into New Child Node

Nodes

- Autocoded Themes
- NVivo\_dataset
- NVivo\_dataset\_b
- Cases
- NVivo\_dataset (2)
- Sentiment
- Relationships
- Node Matrices

Nodes

Name	Sources	References	Created By	
01 Survey		1	80	PH
law		1	1	PH
MOTIVATION		1	1	PH
incentive		0	0	PH
Nurse-jrnl-FG		1	10	PH
Patient		3	56	PH
REAL patient		3	6	PH
simulated patient		1	2	PH
Patient simulation			201	PH
Peer interactions			2	PH
phone hacking			0	PH
Reading			7	PH
Intensive reading			5	PH
Intensive reading			3	PH
teacher resource			1	PH
reputable sources			0	PH
S2			0	PH
SPS			30	CI
Role clarity			2	PH
Uncertainty when facing tasks			0	PH
Uncertainty when facing tasks			0	CI

Context Menu:

- New Node... (Ctrl+Shift+N)
- Open Node... (Ctrl+Shift+O)
- Export
- Print
- Cut (Ctrl+X)
- Copy (Ctrl+C)
- Paste (Ctrl+V)
- Merge Into Selected Node... (Ctrl+M)
- Merge Into New Child Node...
- Delete (Del)
- Auto Code...
- Memo Link
- Expand/Collapse
- Move Up (Ctrl+Shift+U)
- Move Down (Ctrl+Shift+D)
- Create As
- Add To Set...
- Visualize
- Node Properties... (Ctrl+Shift+P)
- Color
- Aggregate Coding from Child Nodes



# Managing nodes (3)

## Merging nodes

- Cut the node
- Merge into Selected Node

The screenshot displays the NVivo Plus interface. On the left, the 'Nodes' tree shows a hierarchy: 'Nodes' (expanded) contains 'Autocoded Themes', 'NVivo\_dataset', 'NVivo\_dataset\_b', 'Cases' (expanded), 'Sentiment', 'Relationships', and 'Node Matrices'. Under 'Cases', there is 'NVivo\_dataset (2)', 'Intensive reading', and 'Teaching'. The 'Intensive reading' node is selected, and a context menu is open over it. The menu options are: 'New Node...' (Ctrl+Shift+N), 'Open Node...' (Ctrl+Shift+O), 'Export', 'Print', 'Cut' (Ctrl+X), 'Copy' (Ctrl+C), 'Paste' (Ctrl+V), 'Merge Into Selected Node...' (Ctrl+M), 'Merge Into New Child Node...', and 'Delete' (Del). The 'Merge Into Selected Node...' option is highlighted. On the right, the 'Nodes' table shows the following data:

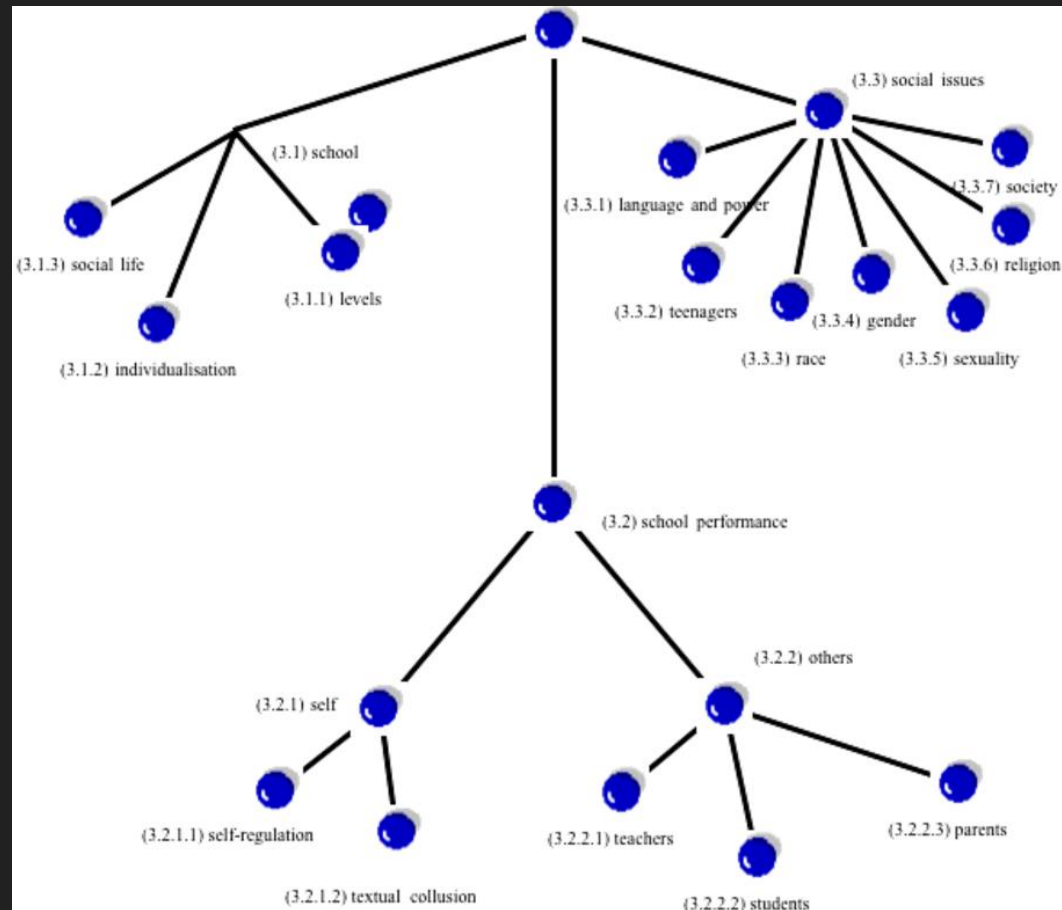
Name	Sources	References	Created By
01 Survey	1	80	PH
law	1	1	PH
MOTIVATION	1	1	PH
Nurse-jrnl-FG	1	10	PH
Patient	3	56	PH
REAL patient	3	6	PH
simulated patient	1	2	PH
Patient simulation	2	201	PH
Peer intera	2	2	PH
phone hac	0	0	PH
Reading	1	2	PH
Intensi	1	4	PH
Int	1	2	PH
Teache	1	1	PH
reputable	0	0	PH
S2	0	0	PH
SPS	1	30	CI

Below the table, a detailed view of the 'Reading' node is shown, listing its children:

Node	Sources	References
Reading	1	3
Intensive reading	1	4
Intensive reading	1	2

The bottom status bar shows 'PH 107 Items' and a taskbar with various application icons.

# Levels of coding



# Organizing nodes > themes

Organize your nodes



Organize your nodes

Build an efficient node hierarchy to clarify your thinking and reflect the association between themes

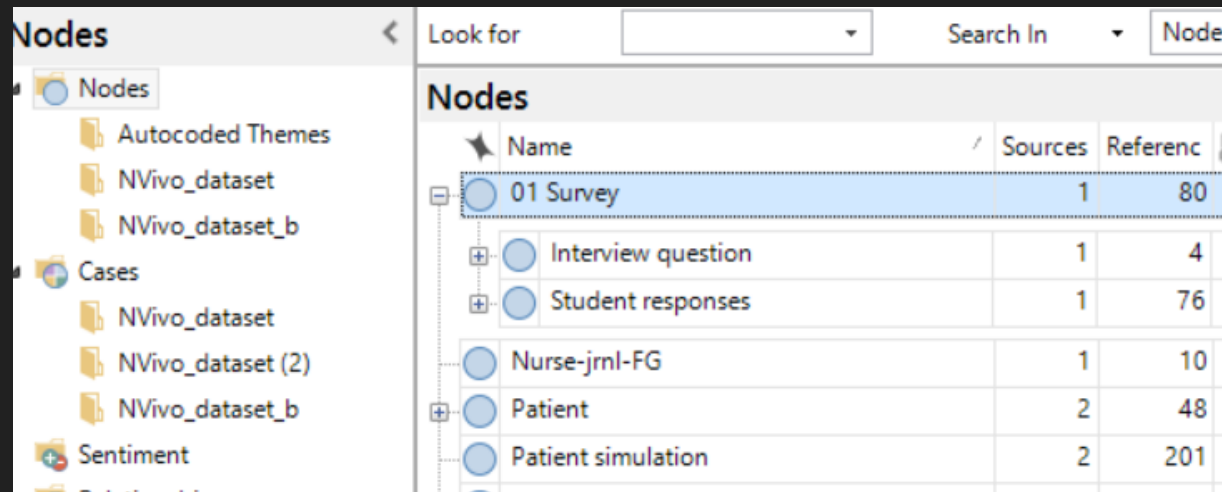
**NVivo for Mac**

Credit:

<https://www.youtube.com/watch?v=KzLcFA0mWDQ>

# Organizing the viewing order of nodes

- By hierarchy
  - Alphabetical
  - Add number before nodes to set your own node order



The screenshot displays the NVivo software interface. On the left, the 'Nodes' pane shows a hierarchical tree structure with folders for 'Nodes', 'Cases', and 'Sentiment'. The 'Nodes' folder is expanded, showing sub-nodes like 'Autocoded Themes', 'NVivo\_dataset', and 'NVivo\_dataset\_b'. The main pane on the right shows a detailed view of the '01 Survey' node, which is highlighted. This view includes a table with columns for 'Name', 'Sources', and 'References'.

Name	Sources	References
01 Survey	1	80
Interview question	1	4
Student responses	1	76
Nurse-jrnl-FG	1	10
Patient	2	48
Patient simulation	2	201

# Viewing coding results

○ Spread: line, paragraph

The screenshot displays the NVivo software interface. On the left, the 'Nodes' tree shows a hierarchy: Nodes (expanded) -> Autocoded Themes -> NVivo\_dataset -> NVivo\_dataset\_b -> Cases -> NVivo\_dataset -> NVivo\_dataset (2) -> NVivo\_dataset\_b. Below this, the 'Sources' list includes 'Nodes' (selected), 'Classifications', 'Collections', 'Queries', and 'Reports'.

The main window shows a table of coding results for the 'Patient' node. The table has columns for 'Name', 'Sources', and 'References'. The data is as follows:

Name	Sources	References
01 Survey	1	80
Nurse-jrnl-FG	1	10
Patient	2	48
Patient simulation	2	201
Peer interactions	1	1
phone hacking	0	0
Reading	1	2
reputable sources	0	0
SPS	1	30
Uncertainty when f	0	0

Below the table, a message says 'Drag selection here to code to a new node'.

On the right, a search bar shows '6~ I think that peer review is b' and 'Patient'. Below it, a list of references is shown, including '<Internals\\Transcript\_nursing\_PH PDF>' with 27 references coded (0.59% coverage). A context menu is open over the first reference, showing options like 'Code...', 'Code to Recent Nodes', 'Code In Vivo', 'Spread Coding', 'Uncode...', 'Uncode from Recent Nodes', 'Uncode from This Node', 'Open Referenced Source', 'Export Node...', 'Print', 'Copy', 'Paste As See Also Link', 'Select All', 'Links', 'Coding Context', and 'Node Properties'. The 'Coding Context' option is highlighted, and a sub-menu is open showing 'None', 'Narrow', 'Broad' (selected), 'Custom...', and 'Entire Source'.

# Auto-coding: mechanical coding

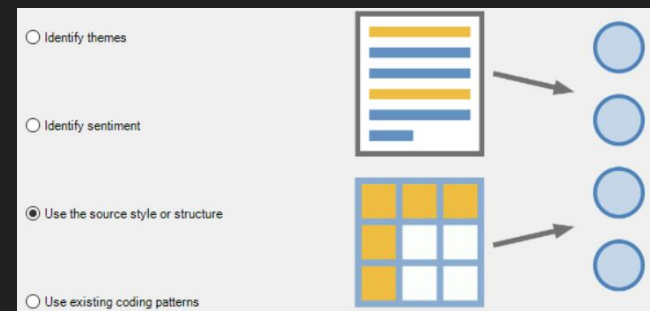
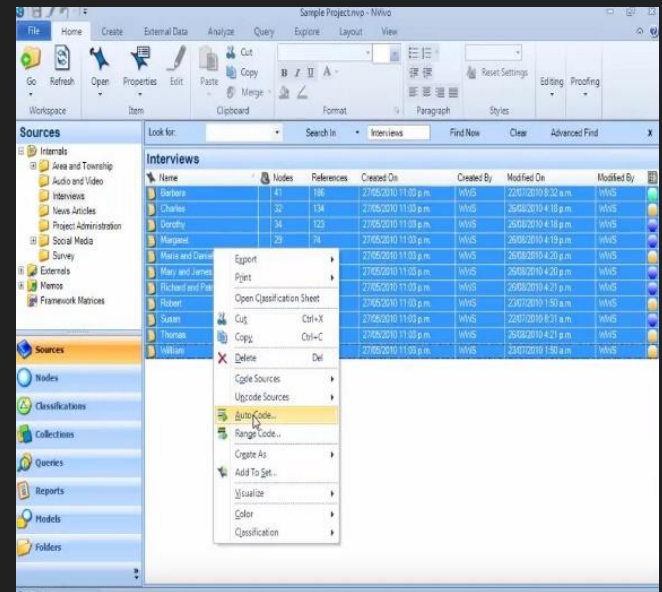
## Format the transcriptions in Style

- Heading 1: Parent (Main question)
- Heading 2: Child (Sub-questions)

### Steps:

Code > Auto Code > Paragraph style > Select  
Heading 1 / Heading 2 > new node >  
naming of new node > OK

<https://www.youtube.com/watch?v=G279rrEnWOI>





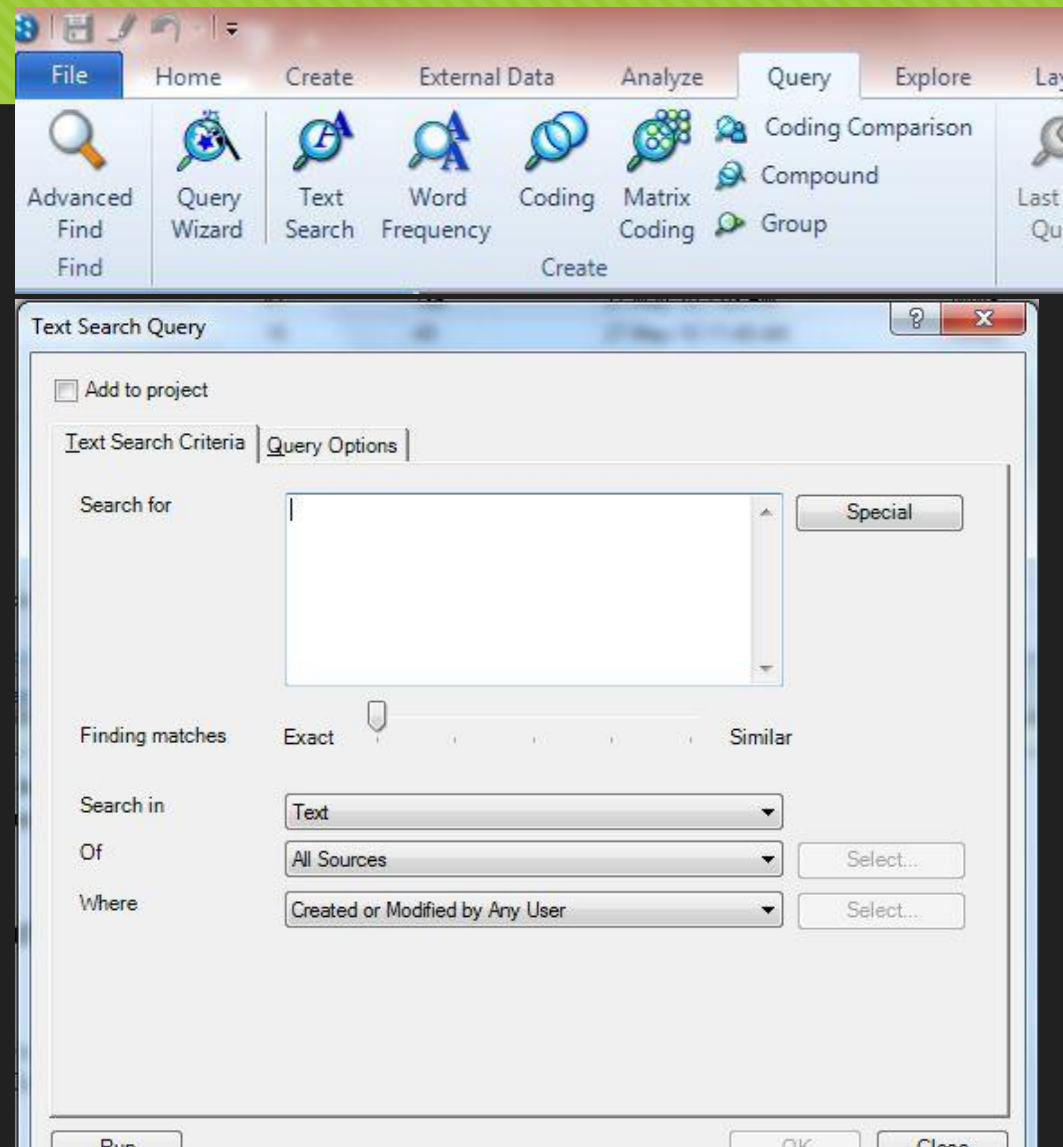
# Text search & save as nodes

- Queries look for source content

- Text Search Query

<https://www.youtube.com/watch?v=CkRXmwqjATk>

- Saving the results as coding at nodes



# Making query after coding (1)

Search in  
'Internal'  
source or  
'Selected  
Items'

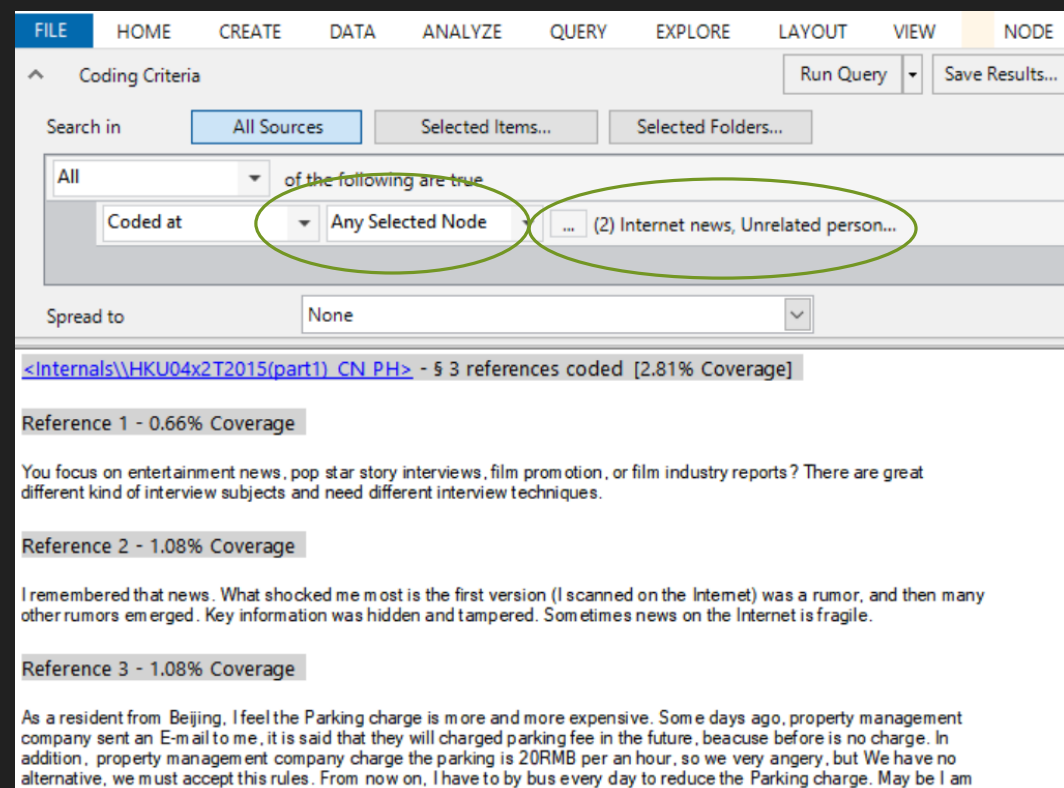
The screenshot shows the NVivo software interface with the 'QUERY' tab selected. The 'Look for' dropdown is set to 'Internals'. The 'Search in' dropdown is also set to 'Internals'. The 'Find Now' button is visible. The 'Coding Criteria' section shows 'Search in' with three options: 'All Sources', 'Selected Items...' (highlighted with a green circle), and 'Selected Folders...'. Below this, the 'Select Project Items' dialog is open, showing a tree view of project items. The 'Internals' folder is selected. The 'Automatically select subfolders' checkbox is checked. The 'Automatically select descendant nodes' checkbox is unchecked. The 'Name' and 'Created' columns are visible in the table below.

Name	Created
NVivo_dataset	1/18/2017 9:58 PM
Patient simulation 1998	1/17/2017 7:02 PM
Transcript_nursing_PH_PDF	1/18/2017 11:51 AM
Transcript_nursing_PH_unbold	1/17/2017 4:17 PM
Transcript_nursing_PH_unbold_with he	1/18/2017 12:12 PM
Transcript_University English	1/18/2017 9:53 PM

# Making query after coding (2)

Select 'Any  
Selected  
Nodes'  
&  
Run Query

Source:  
<https://www.youtube.com/watch?v=NRSRIVBJD4I>



FILE HOME CREATE DATA ANALYZE QUERY EXPLORE LAYOUT VIEW NODE

^ Coding Criteria Run Query Save Results...

Search in All Sources Selected Items... Selected Folders...

All of the following are true

Coded at Any Selected Node ... (2) Internet news, Unrelated person...

Spread to None

<Internals\HKU04x2T2015(part1).CN.PH> - 3 references coded [2.81% Coverage]

Reference 1 - 0.66% Coverage

You focus on entertainment news, pop star story interviews, film promotion, or film industry reports? There are great different kind of interview subjects and need different interview techniques.

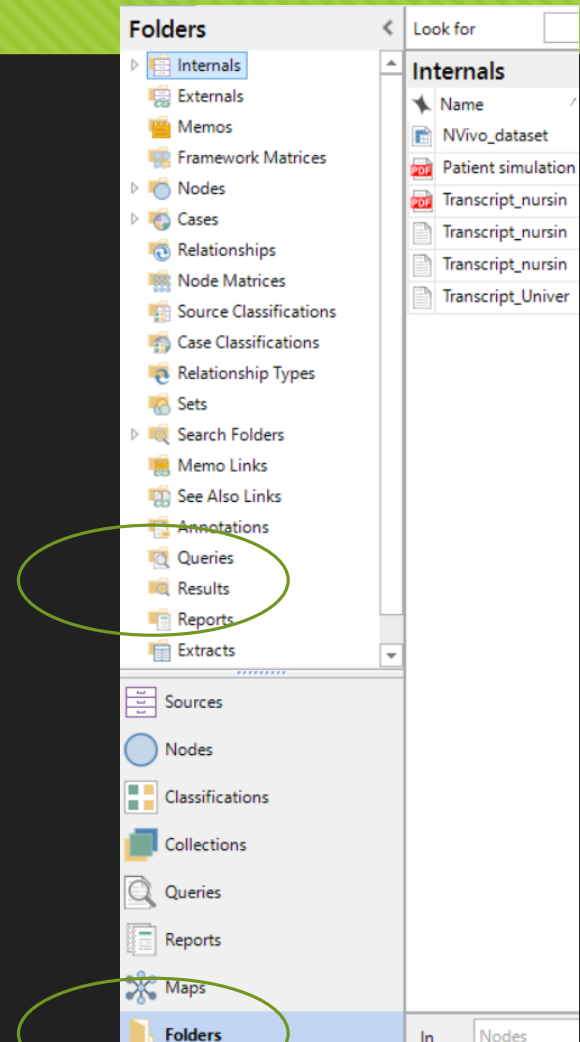
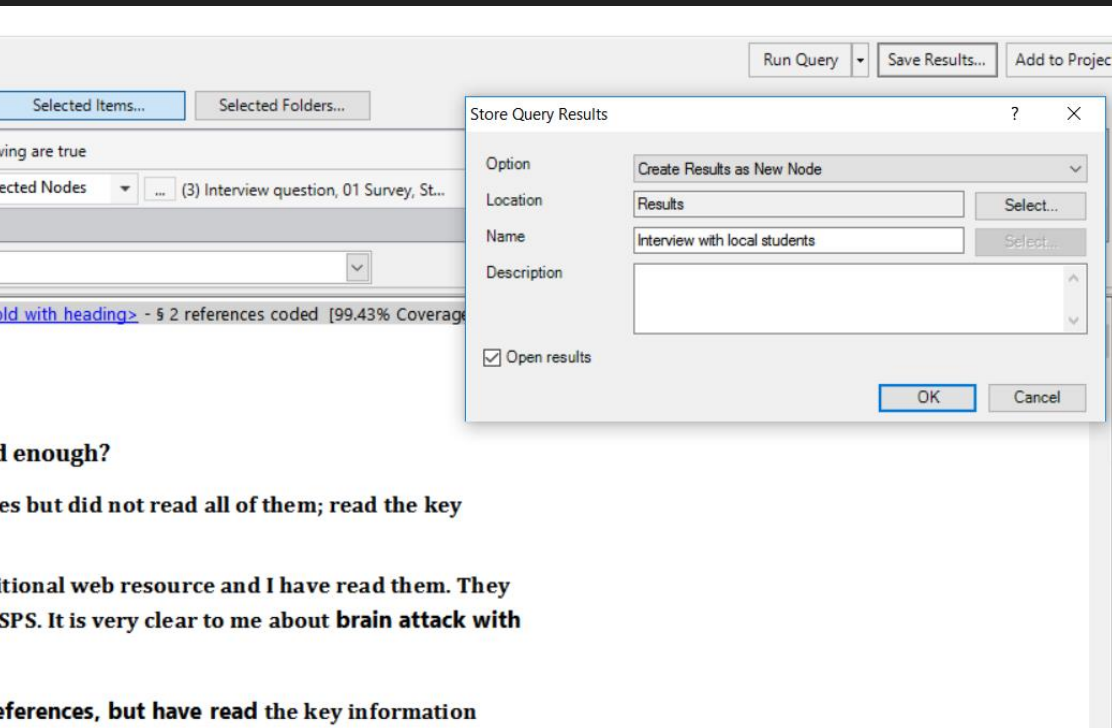
Reference 2 - 1.08% Coverage

I remembered that news. What shocked me most is the first version (I scanned on the Internet) was a rumor, and then many other rumors emerged. Key information was hidden and tampered. Sometimes news on the Internet is fragile.

Reference 3 - 1.08% Coverage

As a resident from Beijing, I feel the Parking charge is more and more expensive. Some days ago, property management company sent an E-mail to me, it is said that they will charged parking fee in the future, beacuse before is no charge. In addition, property management company charge the parking is 20RMB per an hour, so we very angry, but We have no alternative, we must accept this rules. From now on, I have to by bus every day to reduce the Parking charge. May be I am

# Save results in 'Result folder' or as new node



# Validation of qualitative research

- Multiple [independent] coding
- High intercoder reliability

[http://help-nv10.qsrinternational.com/desktop/procedures/run\\_a\\_coding\\_comparison\\_query.htm](http://help-nv10.qsrinternational.com/desktop/procedures/run_a_coding_comparison_query.htm)

- Respondent validation



# Verification techniques used in qualitative research

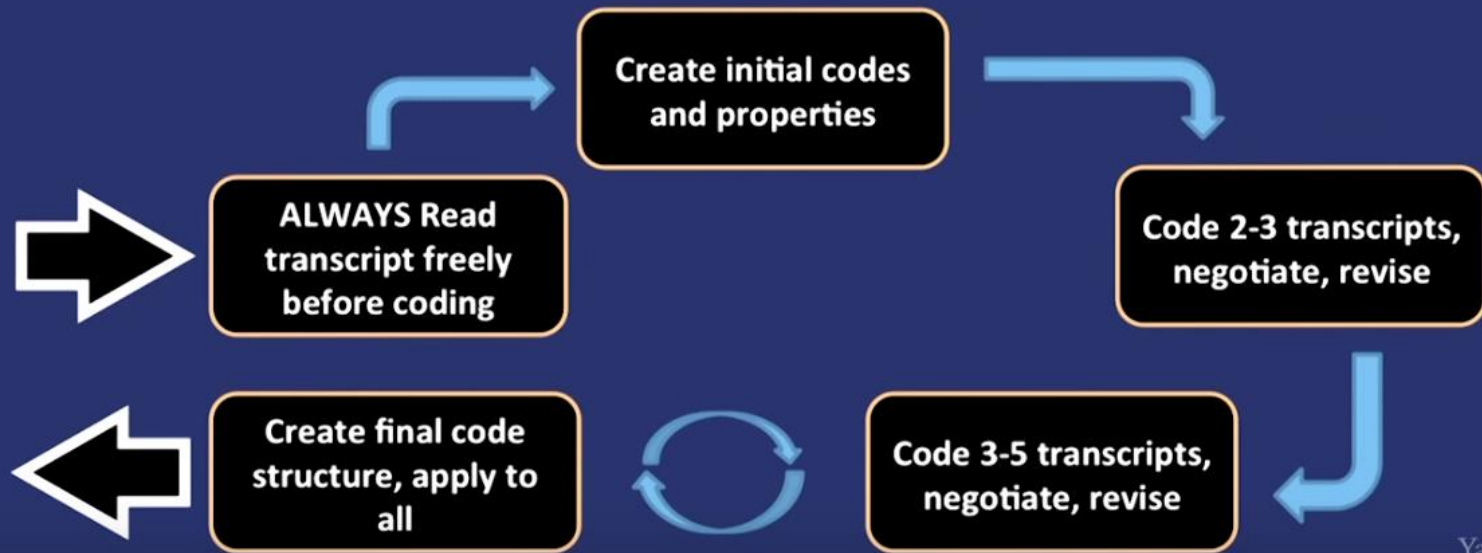
Technique	Definition
Triangulation	Using multiple data sources in an investigation to produce understanding
Peer review/ debriefing	The "process of exposing oneself to a disinterested peer in a manner paralleling an analytical session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer's mind"
External audits/ auditing	Auditing involves having a researcher not involved in the research process examine both the process and product of the research study. The purpose is to evaluate the accuracy and evaluate whether the findings, interpretations, and conclusions are supported by the data
Member checking	Data, analytic categories, interpretations, and conclusions are tested with members of those groups from whom the data were originally obtained. This can be done both formally and informally, as opportunities for member checks may arise during the normal course of observation and conversation

Image source: <http://www.annfammed.org/content/6/4/331.full.pdf+html>



# Coding process (1)

Coding is an iterative process



Yale

Image source: <https://www.youtube.com/watch?v=opp5tH4uD-w>

# Coding process (2)

## The Coding Process in Inductive Analysis

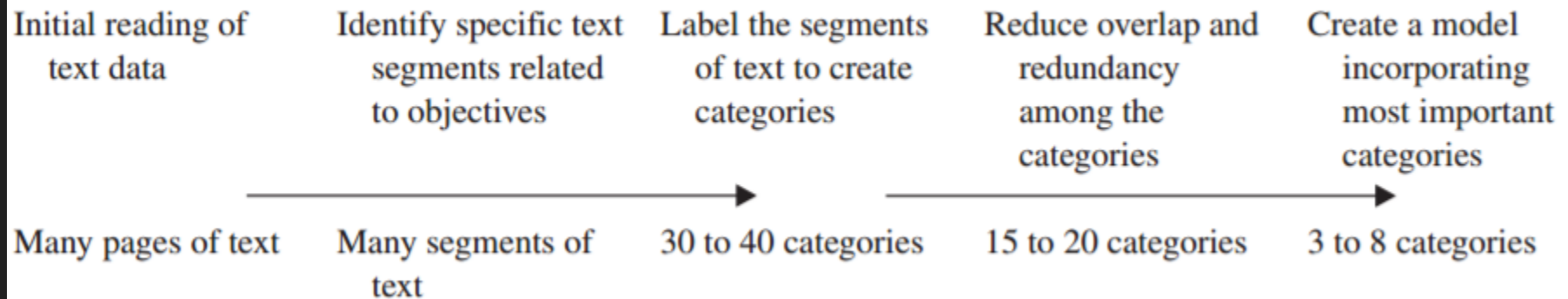


Image source: [https://flexiblelearning.auckland.ac.nz/poplh701/8/files/general\\_inductive\\_approach.pdf](https://flexiblelearning.auckland.ac.nz/poplh701/8/files/general_inductive_approach.pdf)

# Model building

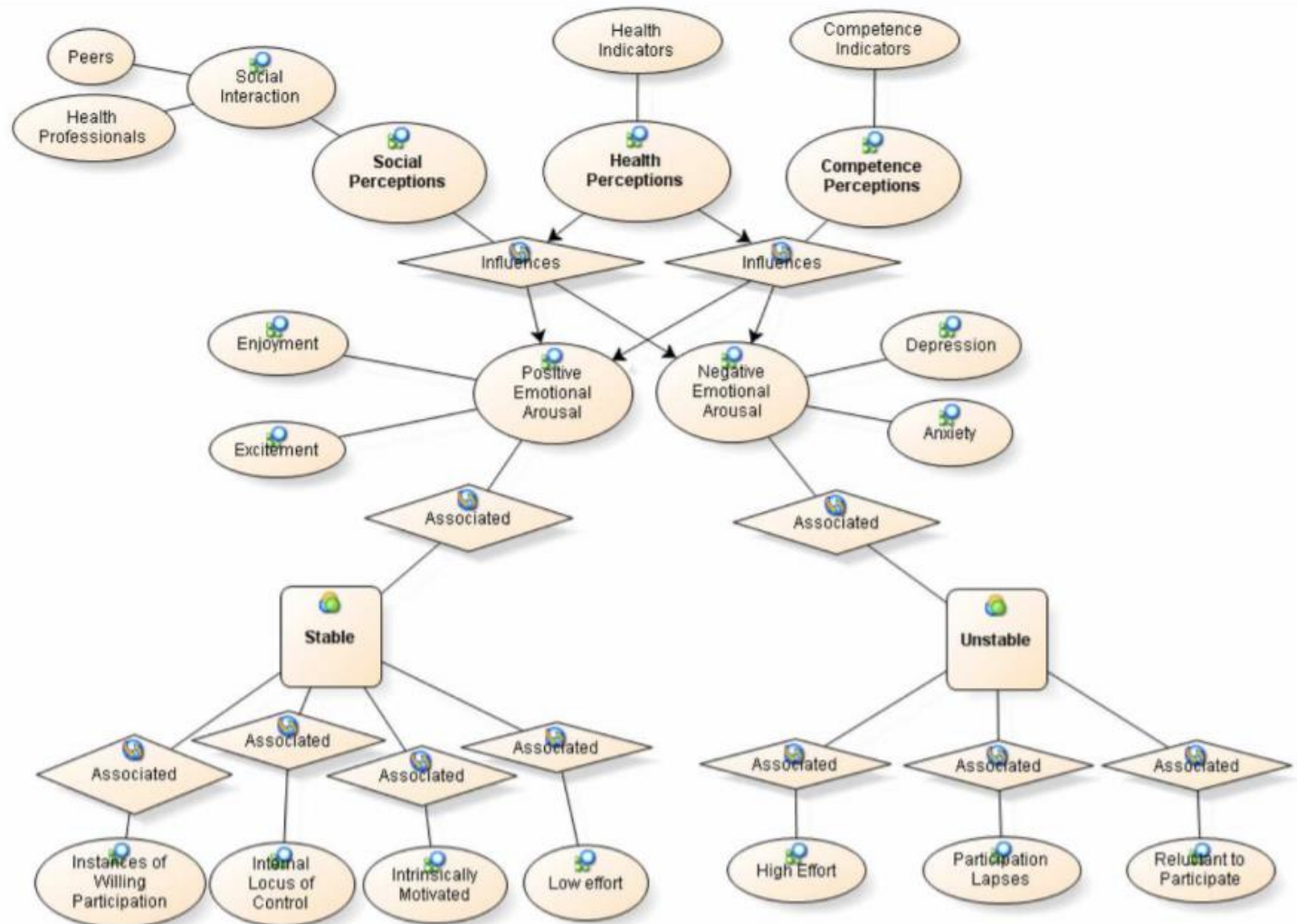


Image source:  
<http://www.tandfonline.com/doi/pdf/10.1080/13645570902996301?needAccess=true>

# Research processes

- Research questions / foci
- Research methods, e.g. conducting interviews
- Data collection
  - Collect few interviews transcription
  - Collect all interviews > transcription
- **Data processing**
  - **Decide FULL transcription / summary of interviews**
  - **Listen to few recorded interviews**
  - **Decide what and how to code > categories / themes > sub-themes [common properties]**
  - **Validate coding > regularly comparing codes; comparing codes between coders**

# BEFORE importing source materials

- Format: remove table in the Word file
- Data processing on interviewing script
  - Interviewees [pseudo name (unique ID), ID – discipline]
  - Entry by questions
  - Entry by main ideas
  - Entry by turns (interviewer / interviewee)
  - Transcription [relating to main research foci]
    - Spoken manner
    - Written form
  - Highlights in bold
- Create folders
- Import file as 'internal' source

# Reflection

- Data sources?
- Coding wrt RQs
- Coding consistency
- Coding reliability
- Latent meaning (missing coding)
- Compare and contrast existing coding / examples
- Aggregation or expansion of themes/categories
- Supporting evidence [FGD, document (primary & secondary)]
- Reaching **saturation**

The final grounded theory should represent an explanatory model of the studied phenomenon grounded in relevant empirical data (Glaser & Strauss, 1967)



# Conclusion

- **RE'SEARCH'** > Providing evidence and supporting arguments through exhausting sources of data with renewal insights to formulate development of theories.
- A systematic use of qualitative data analysis software can provide a reliable mechanism for conducting qualitative research.

# Video tutorials (1)

- Importing documents in NVivo 10 for Windows in 3 minutes

<https://goo.gl/sbPDx5>

- Importing datasets in NVivo 10 for Windows

<https://goo.gl/zPSKxK>

- Getting started with NVivo

<https://www.youtube.com/watch?v=Xe0NpJPLQ6k&t=921s>

# Video tutorials (2)

- Creating nodes in NVivo 10 for Windows in 2 minutes  
<https://www.youtube.com/watch?v=idv9tLLvgWc>
- Coding is faster and easier in NVivo 11  
[https://www.youtube.com/watch?v=2ltGzs\\_uoog](https://www.youtube.com/watch?v=2ltGzs_uoog)
- Coding a video in NVivo 10  
<https://www.youtube.com/watch?v=5MKf6DeJAb0>
- NVivo 10 Text search Queries  
<https://www.youtube.com/watch?v=CkRXmwqjATk>
- Automatic coding techniques in NVivo 11  
[https://www.youtube.com/watch?v=4S\\_xiW\\_vwWM](https://www.youtube.com/watch?v=4S_xiW_vwWM)

# Video tutorials (3)

- \*NVivo 11 Pro: Coding query  
<https://www.youtube.com/watch?v=NRSRIVBJD4I>
- \*Using NVivo 10 for Windows for Sociological Qualitative Data  
<https://www.youtube.com/watch?v=vfqaW61o0rg>

# More videos for Window Users

- Basic training NVivo 10

<https://www.youtube.com/watch?v=x0axXcOAGiU>

- Autocoding

<https://www.youtube.com/watch?v=yKWj1HTOjR4>

- Intermediate NVivo 11 training

<https://www.youtube.com/watch?v=XsplolE3Tvw>

- Advanced NVivo 10 training

<https://www.youtube.com/watch?v=o9oiik67gNY>

- Power of coding

<https://www.youtube.com/watch?v=sLX8vaK3qTw>

# Videos for Mac Users

- Import Documents in NVivo for Mac | NVivo How-to Video (NVivo 10)  
<https://www.youtube.com/watch?v=ITGuYL5Xu4c&list=PLNjHMRgHS4Ffw7846yApe-qTP1kUrN4RX&index=2>
- How to import data from a spreadsheet in NVivo for Mac | NVivo How-to Video (NVivo 10)  
<https://www.youtube.com/watch?v=aSZC9mKu78Y&list=PLNjHMRgHS4Ffw7846yApe-qTP1kUrN4RX&index=14>
- How to annotate in NVivo for Mac | NVivo How-to Video (NVivo 10)  
<https://www.youtube.com/watch?v=YovxoK8Ahz4&index=13&list=PLNjHMRgHS4Ffw7846yApe-qTP1kUrN4RX>
- Organize your nodes (NVivo 11)  
<https://www.youtube.com/watch?v=KzLcFA0mWDQ>



# Videos for Mac Users

- Run a Text Search query with NVivo for Mac | NVivo How-to Video (NVivo 10)  
<https://www.youtube.com/watch?v=816nFkivf3k&index=8&list=PLNjHMRgHS4Ffw7846yApe-qTP1kUrN4RX>
- Getting Started in NVivo for Mac | NVivo Show and Tell Webinar (NVivo 10)  
[https://youtu.be/w\\_S7S2\\_Rkog](https://youtu.be/w_S7S2_Rkog)
- NVivo for Mac Overview (NVivo 11)  
<https://www.youtube.com/watch?v=l-qvoGEZoW4=158s>

More can be viewed at

<https://www.youtube.com/playlist?list=PLNjHMRgHS4Ffw7846yApe-qTP1kUrN4RX> (NVivo 10)

<https://www.youtube.com/playlist?list=PLNjHMRgHS4FfTN-GoztTaPLshavAb0NxR> (NVivo 11)

# Manual links for Windows and Mac

- NVivo 10 manual for Windows

<http://download.qsrinternational.com/Document/NVivo10/NVivo10-Getting-Started-Guide.pdf>

- NVivo 10 manual for Mac

<http://download.qsrinternational.com/Document/NVivo10forMac/NVivo10-for-Mac-Getting-Started-Guide.pdf>

- NVivo 11 manual for Windows, [Pro and Plus]

<http://download.qsrinternational.com/Document/NVivo11/11.4.0/en-US/NVivo11-Getting-Started-Guide-Pro-edition.pdf> [Pro]

<http://download.qsrinternational.com/Document/NVivo11/11.4.0/en-US/NVivo11-Getting-Started-Guide-Plus-edition.pdf> [Plus]

- NVivo 11 manual for Mac

<http://download.qsrinternational.com/Document/NVivo11forMac/11.4.0/en-US/NVivo-for-Mac-Getting-Started-Guide.pdf>