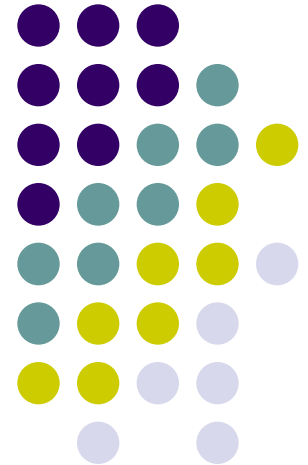


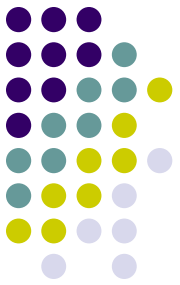
Presentation at the University of Massachusetts IT-Higher Education Conference, April 2007

Qualitative Research Software and Higher Education: Demonstrating the Possibilities for Scholarship, Evaluation, and Accreditation

Judith Davidson, Ph.D.
Carolyn Siccama, Ed.D.
Stacy Penna, Ed.D.
Kerry Donohoe, Ed.D.

University of Massachusetts Lowell
Qualitative Research Network
April 5, 2007

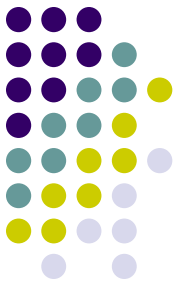




Presenters

- Judith Davidson, Ph.D., Graduate School of Education
- Carolyn Siccama, Ed.D., Online Learning-Faculty Development
- Stacy Penna, Ed.D., QSR
- Kerry Donohoe, Ed.D., Office of the Registrar

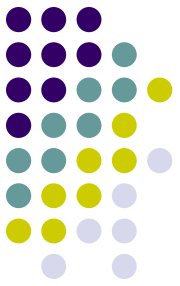
What is Qualitative Research?



- Research method to explore social meaning through non-numerical interpretive methods
- Data can take many forms: Observations, Interviews, Documents, photos, drawings...

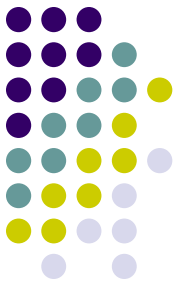


What is Qualitative Research Software?



- An electronic container for qualitative research projects
- Special tools for the organization and analysis of non-numerical texts
 - Allows researcher to develop an indexing system for these texts
 - Search and compare texts
 - Develop interpretations and theories
 - Model ideas

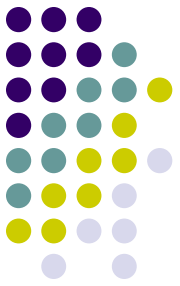
What is special about Qualitative Research Software?



Qualitative research software makes qualitative research projects:

- Transparent AND
- Portable

The Value of Qualitative Research Software to Higher Education



QR software supports scholarship in diverse fields (Education, Health, Criminal Justice, Business, Law, Sociology, Anthropology, Communications...)

QR software is widely used for program evaluation.

QR software has the potential to support a range of other higher education activities where non-numerical texts are central.

University of Massachusetts Lowell

UML Home News Calendar Directory Maps & Directions Libraries Questions UML Search: 

University of Massachusetts Lowell



Qualitative Research Network

Who We Are

QRN Events

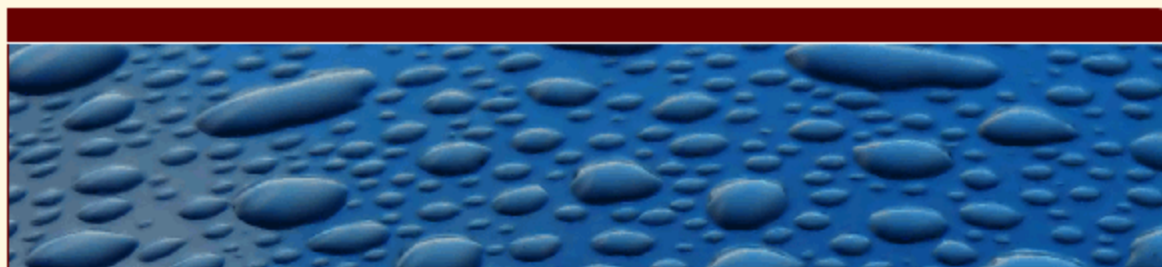
Faculty Fellowship
Opportunities

For Students

NVivo 7 Qualitative Data
Analysis Software

Online Research Resources

Contact Us



The Qualitative Research Network

[UML Home](#) > [Qualitative Research Network](#)

 [Printer Friendly](#)

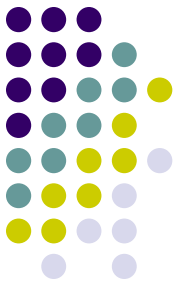
The Qualitative Research Network offers members of the UML Community interaction through regular meetings to learn about the work of others on campus, as well as funding and publication opportunities; qualitative data analysis software, training and support, including NVivo, for which the campus has a site license; interdisciplinary teaching and graduate course development; and research support.

- [QRN Events](#)
- [NVivo 7 Qualitative Data Analysis Software](#)
- [Faculty Fellowship Opportunities](#)
- [For Students: Qualitative Research Courses at UML](#)
- [Qualitative Research Resources at UML and Beyond](#)

One University Avenue . Lowell, MA 01854 . 978-934-4000 - [Contact Us](#)
[UMass Lowell's Virtual Campus Directory for Mobility Access](#)

[UMassOnline](#) | [UMass Club](#) | [UMass System](#)

This is an [Official](#) Page/Publication of the University of Massachusetts Lowell

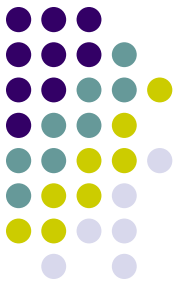


Why we chose NVivo

- Most widely sold QR Software on the market
- Offered most flexible capacity for different forms of data
- Could be used by both beginners and advanced users
- Technical support is available
- We wanted campus to focus on one package



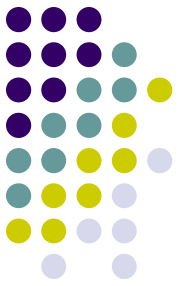
QR Software Supports at University of Massachusetts-Lowell



- NVivo Site License
- Training Opportunities
- Tasters: Meet NVivo One-on-one!
- User's Group
- A community of users in diverse fields



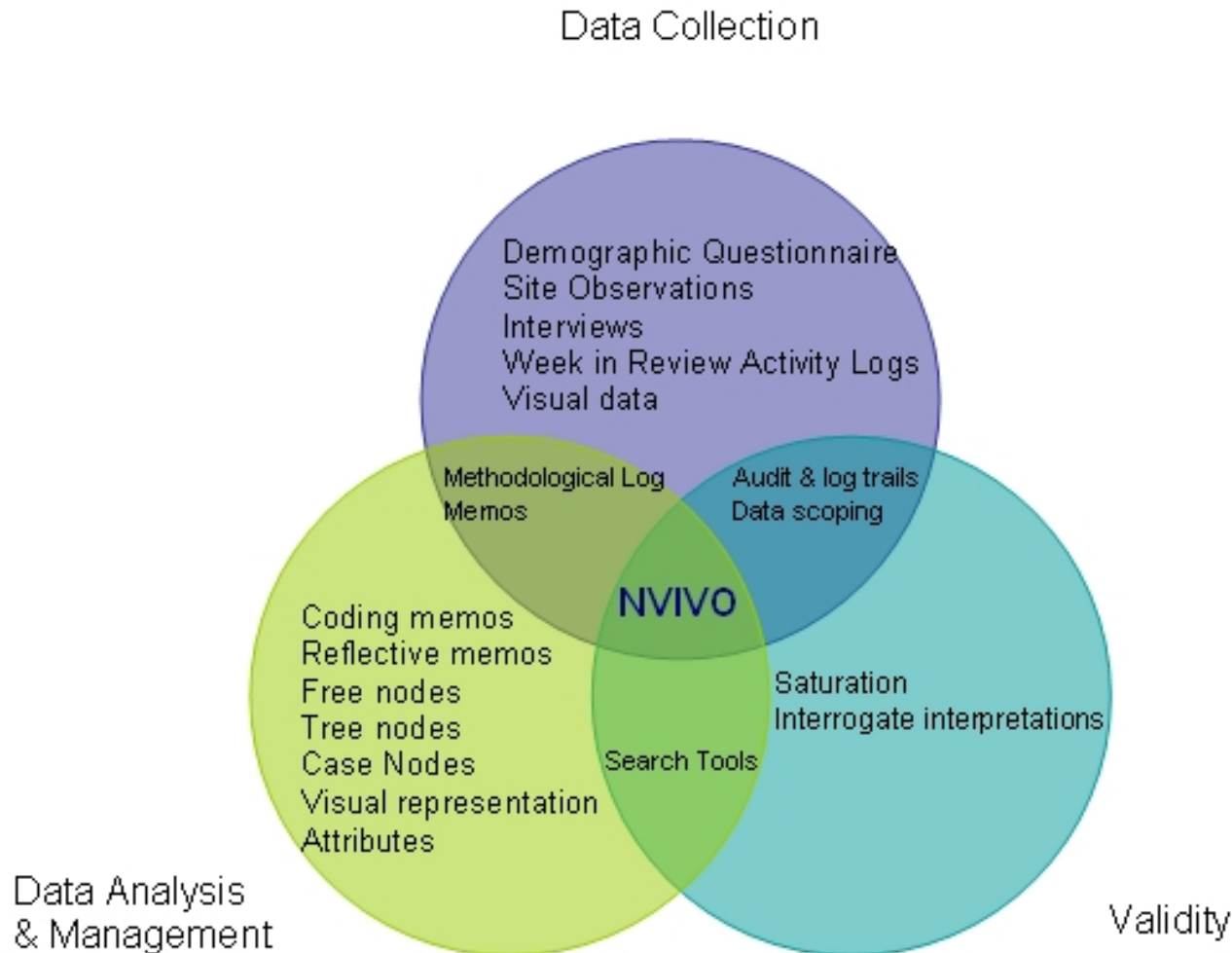
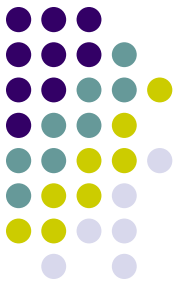
Three Possibilities for QR Software in Higher Education:

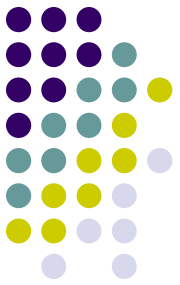


- Carolyn Siccama, Ed.D.
 - NVivo as a Tool for Scholarship
- Stacy Penna, Ed.D.
 - NVivo as a Tool for Program Evaluation
- Kerry Donohoe, Ed.D.
 - NVivo as a Tool for Accreditation

NVivo as a tool for Scholarship

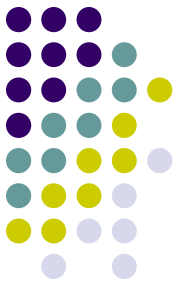
Carolyn Siccama





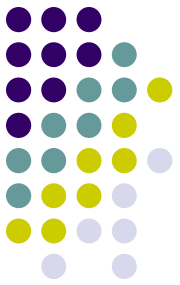
Context of Research Study

- Instrumental and collective case study (Stake 1995, 2003)
- Research Question: What are the work activities of the professionals who occupy the role of faculty support staff in online education programs?
- 4 Participants, 4 institutions
- For further information see Feb 2007 issue of The International Journal of Instructional Technology and Distance Learning



Data Collected

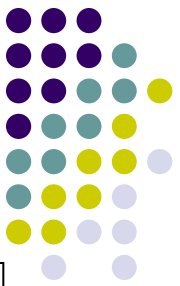
- 4 Demographic Questionnaires
- 8 Interviews
- 7 Site Observations
- 8 Activity Logs
- 40 Photographs (visual data)
- Various artifacts (print and electronic)



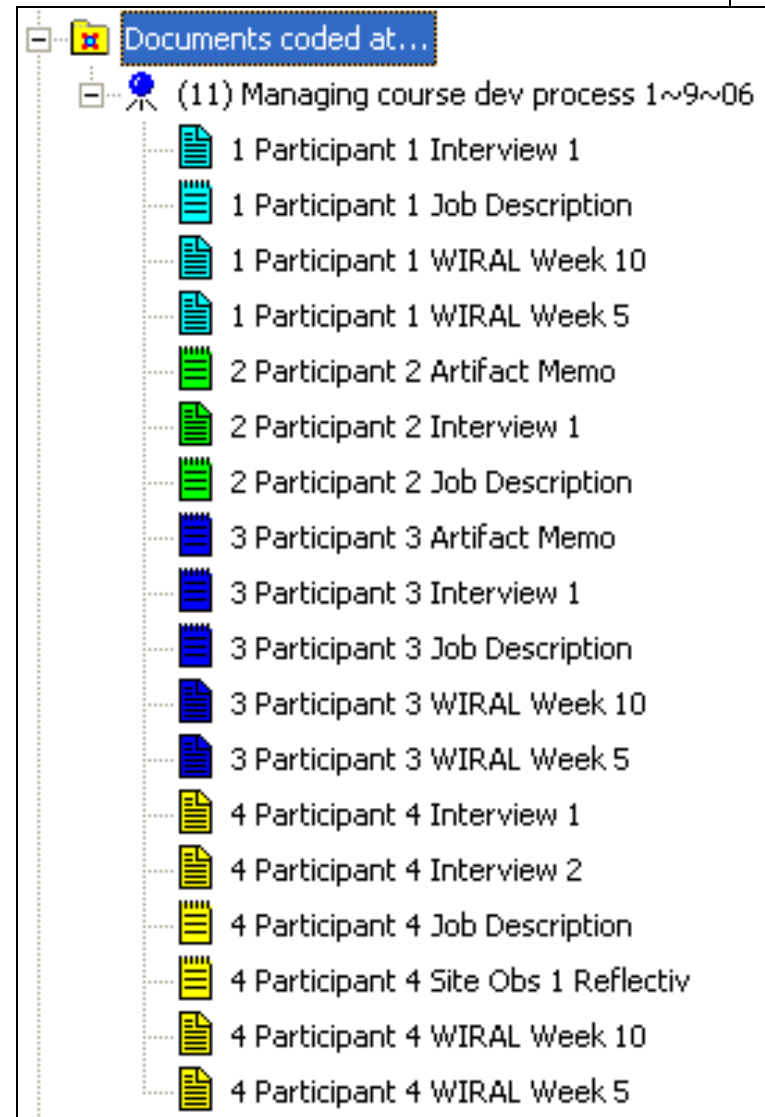
NVivo “Shell” (Hickey, 2006)

- Create placeholders for future data
- Serves as a data management tool
- Examples:
 - Create templates for transcribed data
 - Create memos
 - Set up cases (participant and institution)
 - Set up case attributes
- Result: simultaneous data collection and interpretation

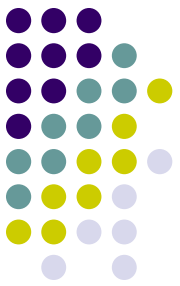
NVivo and Visual Representation



- Visual representation within NVIVO
 - show tools
 - searching tools








Visual representation within a Dissertation

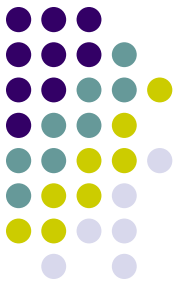


- Tables
- Screen Captures

Nodes in /Managing course dev process 1~9~06

Title	No.	Passages	Created	Modified
 timelines & checklists	1	36	1/10/2006 - 12:13:49 PM	1/23/2006 - 8:44:32 PM
 Meetings	2	34	1/10/2006 - 12:14:01 PM	1/11/2006 - 8:23:25 PM
 Behind the Scenes	3	16	2/5/2006 - 4:39:24 PM	2/8/2006 - 10:51:03 AM
 fac in various stages of online cour	4	29	1/10/2006 - 1:17:30 PM	1/23/2006 - 8:47:28 PM
 challenges	5	17	1/10/2006 - 1:20:58 PM	1/23/2006 - 8:38:19 PM

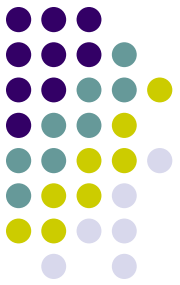
NVivo as a tool for scholarship



- Electronic format allows for:
 - Creation of additional NVivo projects
 - Conduct further analysis
 - Import new data
 - Answer additional research questions

NVivo as a tool for Program Evaluation (Korn, 1989)

Stacy Penna

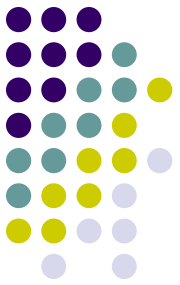


- Formative

- What are the strengths and weaknesses?
- How can it be improved?
- What is working well and not working?

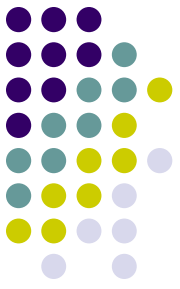
- Summative

- Has the program been effective?
- Did the program produce desired outcomes?
- Should the program continue?



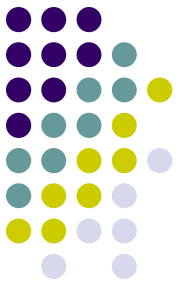
Evaluation Method

- Qualitative Instrumental & Collective Case Study (Stake, 1995)
 - Instrumental to understanding an issue
 - Collective means multiple cases
 - Cases: 4 Participants



Evaluation Site Description

- Mylen Historical Site
 - Museum
 - Educational Center
 - Professional Development
 - Field Trips
 - Classroom Resources
 - Historical Buildings
- Mylen 8th grade classrooms
 - Heterogeneous Middle School Teams
 - Students: 58% Minorities, 42% White, 6% Immigrants, 14% Special Education, 27% ELL, 65% Free or Reduced Lunch

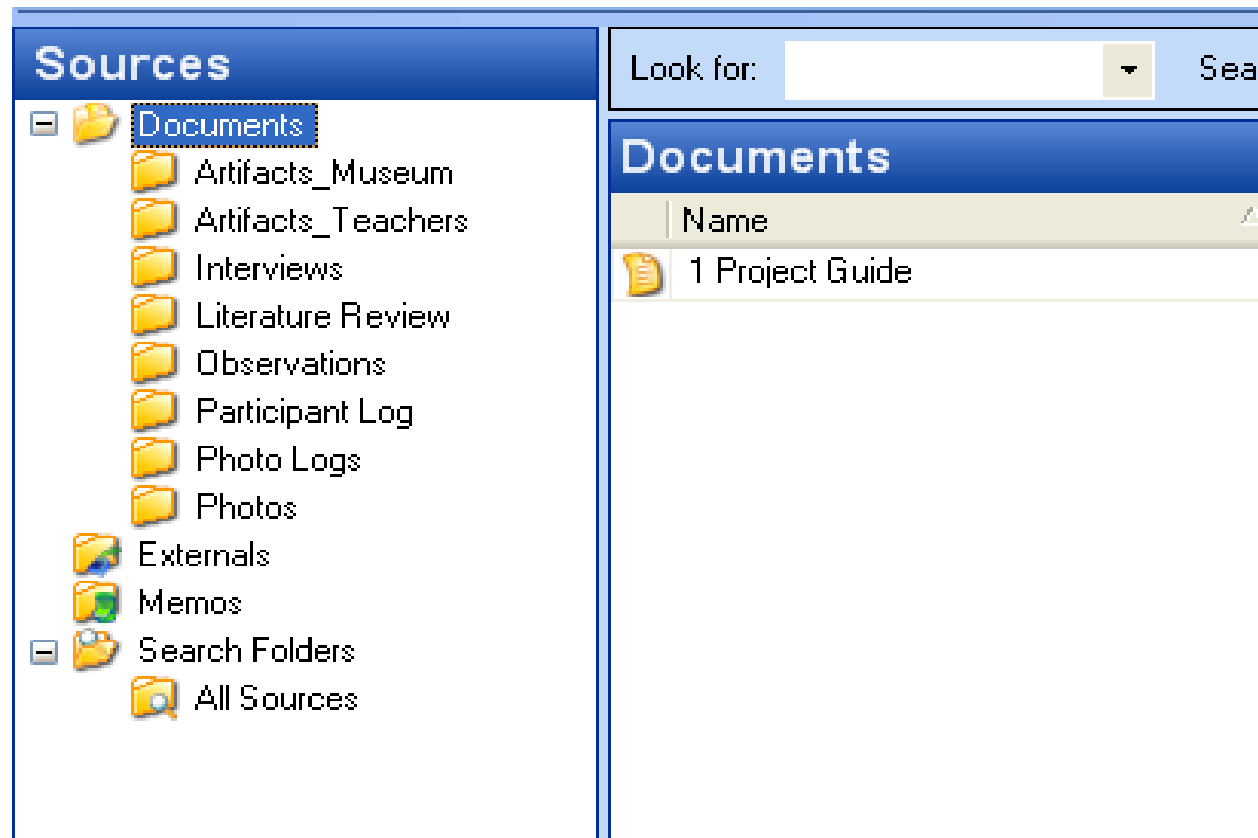
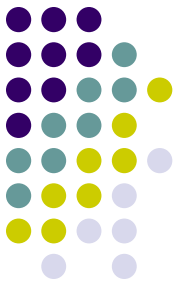


Data Collected

Interviews	4 Pre-Field Trip Interviews 4 Post-Field Trip Interviews 1 Historical Site Informant Interview
Observations	4 Field Trip Observations 1 Professional Development Workshop Observation
Participant Logs	4 Logs
Visual Data	52 Photos by Social Studies Teachers 48 Photos by Researcher at Site
Artifacts	39 Artifacts: Social Studies Teachers 35 Artifacts: Historical Site

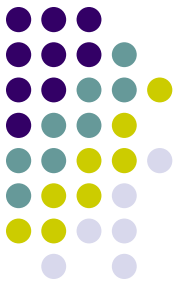
Data Collected

NVivo7



Participants

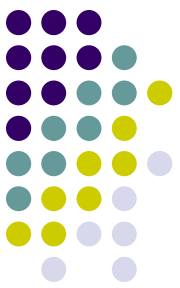
Teaching Experience



	John	Karen	Sue	Amy
Highest Degree	M.A. in Elementary Education	C.A.G.S. Reading & Language	M.A. in curriculum	B.S. Criminal Justice
Undergrad Major	Social Studies	U.S. History	History	Criminal Justice
Teaching Certification	M.S. Social Studies	Elementary & Middle School S.S.	Social Studies 7 th – 12 th grades	General Middle School
Years Teaching	10	7	20	3
Yrs. teaching 8th S.S. in Mylen	3	6	14	1

Participants

NVivo7



Nodes

- Free Nodes
- Tree Nodes
- Cases
- Relationships
- Matrices
- Search Folders
- All Nodes

Look for: **Search In:**

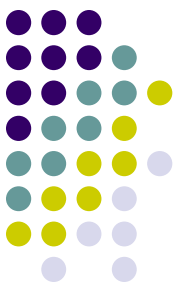
Cases




















	Name
+	Museum
+	Teacher 1
-	Teacher 2 <ul style="list-style-type: none">Artifact FT_Case 2Artifact_Case 2Interview Transcript_Post_Case 2Interview Transcription_Pre_Case 2Observation_Case 2Participant Log_Case 2Photo Log Museum_Case 2Photo Log_Case 2
+	Teacher 3
+	Teacher 4

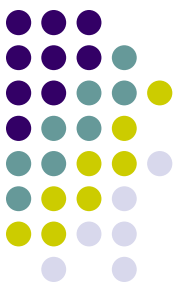
Sources

Attributes for Cases

NVivo7



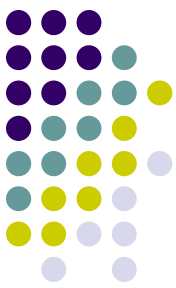
Attributes		
	Name	Type
	Attend summer institutes	Number
	Center Experience	String
	Field Trip Exp at Center	Number
	Field Trip per year	Number
	Gender	String
	Graduate Education	String
	Major	String
	Middle School	String
	Minor	String
	Primary Sources from Center	String
	Social Studies Pedagogy	String
	Student Structure	String
	Teacher Certification	String
	Teaching S.S. at current M.S.	Number
	Teaching S.S. over career	Number
	Teams	String
	Use Center's resources	String
	Workshops at Center	String
	Years Teaching	Number



Summative Evaluation: NVivo7 Coding

Name	Sources	References
Formative Evaluation	0	0
Literature Review	0	0
Summative Evaluation	0	0
Desired Outcomes	0	0
Expand teacher knowledge	0	0
Teaching materials	0	0
Teaching strategies	0	0
Effective	0	0
Administration	11	39
Collaboration	0	0
Field Trip Content	16	114
Partnership	1	1
Post field Trip Experience	17	34
Pre-Field Trip	17	46
Students	12	76
Not Effective	0	0
12. Parent & Community Involvement	1	1
4. Shared Vision	2	2
6. Planning & Evaluation	3	8
8. Clear Responsibilities	1	1

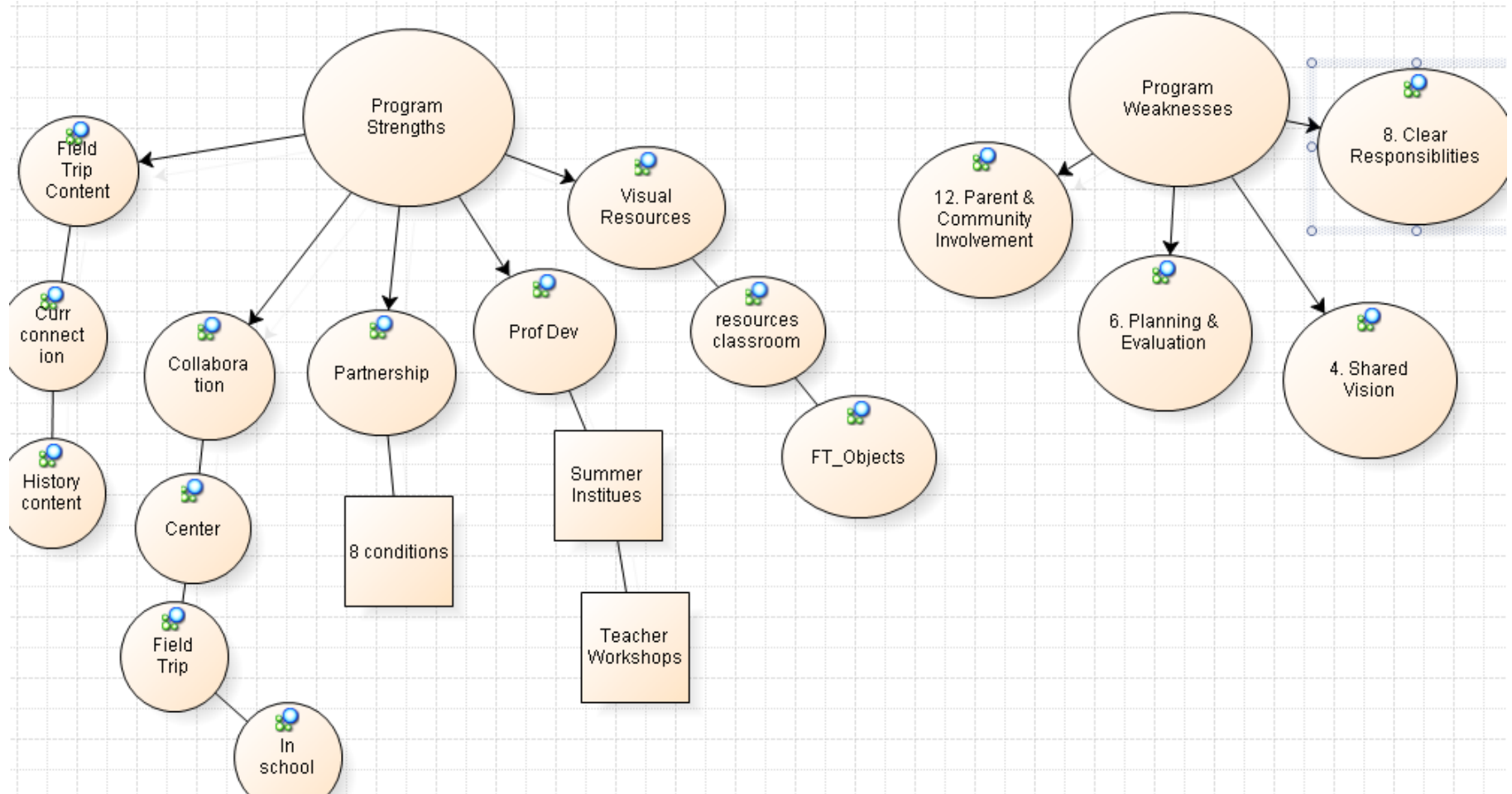
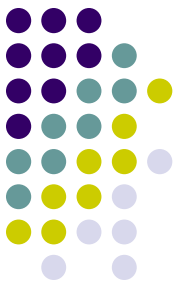
Summative Evaluation: Desired Outcomes



Tree Nodes			
	Name	Sources	References
+	Formative Evaluation	0	0
+	Literature Review	0	0
-	Summative Evaluation	0	0
-	Desired Outcomes	0	0
-	Expand teacher knowledge	0	0
	Content Knowledge	18	58
	CT Professional Development	13	71
+	FT Content	16	114
	Historical content	16	102
-	Teaching materials	0	0
+	FT Resources	19	144
	Resources	32	151
+	Visual Resources	0	0
-	Teaching strategies	0	0
+	FT Instructional strategies	16	145
+	Instructional Methods	0	0
+	Effective	0	0
+	Not Effective	0	0

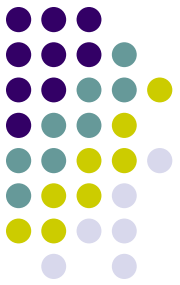
NVivo7 Model

Formative Evaluation



NVivo7 Queries: Text Search

Hands-on Instruction



Queries

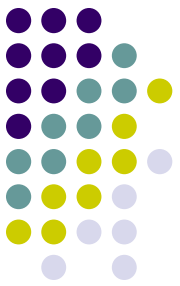
Name
cases
Collaboration_Center
Collaboration_FT
Collaboration_School
exp adv
Hands On
Instruction
Instruction_theme
Outcome_Expand Teacher
Partnership
Student
University

Hands On - Results Preview

Name	In Folder
Museum	Cases
Teacher 3	Cases
Teacher 4	Cases
Teacher 2	Cases
Teacher 1	Cases

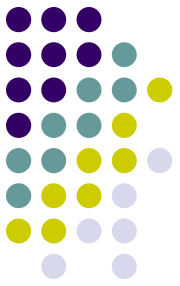
NVivo7 Queries: Matrix Searches

Outcome – Expand Teacher Knowledge



Queries				
Name				
cases				
Collaboration_Center				
Collaboration_FT				
Collaboration_School				
exp adv				
Hands On				
Instruction				
Instruction_theme				
Outcome_Expand Teacher Knowledge				

Outcomes_Teache				
	A : Teacher 1 ▾	B : Teacher 2 ▾	C : Teacher 3 ▾	D : Teacher 4 ▾
1 : CT Professional Development ▾	19	19	17	19
2 : FT Content ▾	18	21	21	20
3 : Content Knowledge ▾	22	24	22	23
4 : Historical content ▾	18	21	21	20

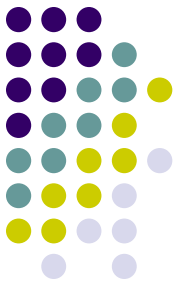


Benefits: Program Evaluations

- Share findings with staff: Transparent & Portable
- Multiple evaluators can code
- Aids in writing evaluation
- Continually add data to NVivo7
- Demonstrates change over time

NVivo as a tool for Accreditation

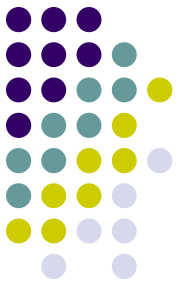
Kerry Donohoe



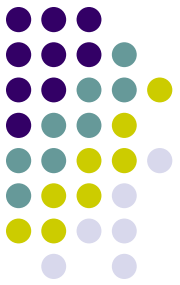
- The emergence of the idea
- A shared experience/challenge
- A proposal to utilize Qualitative Research Software as a transformational tool in the process of accreditation

The Challenges

- Time & space
- Data collection & data storage
- Data analysis
- Accessibility of data
- Transparency of data
- Transportability of data



Hypothetical Case



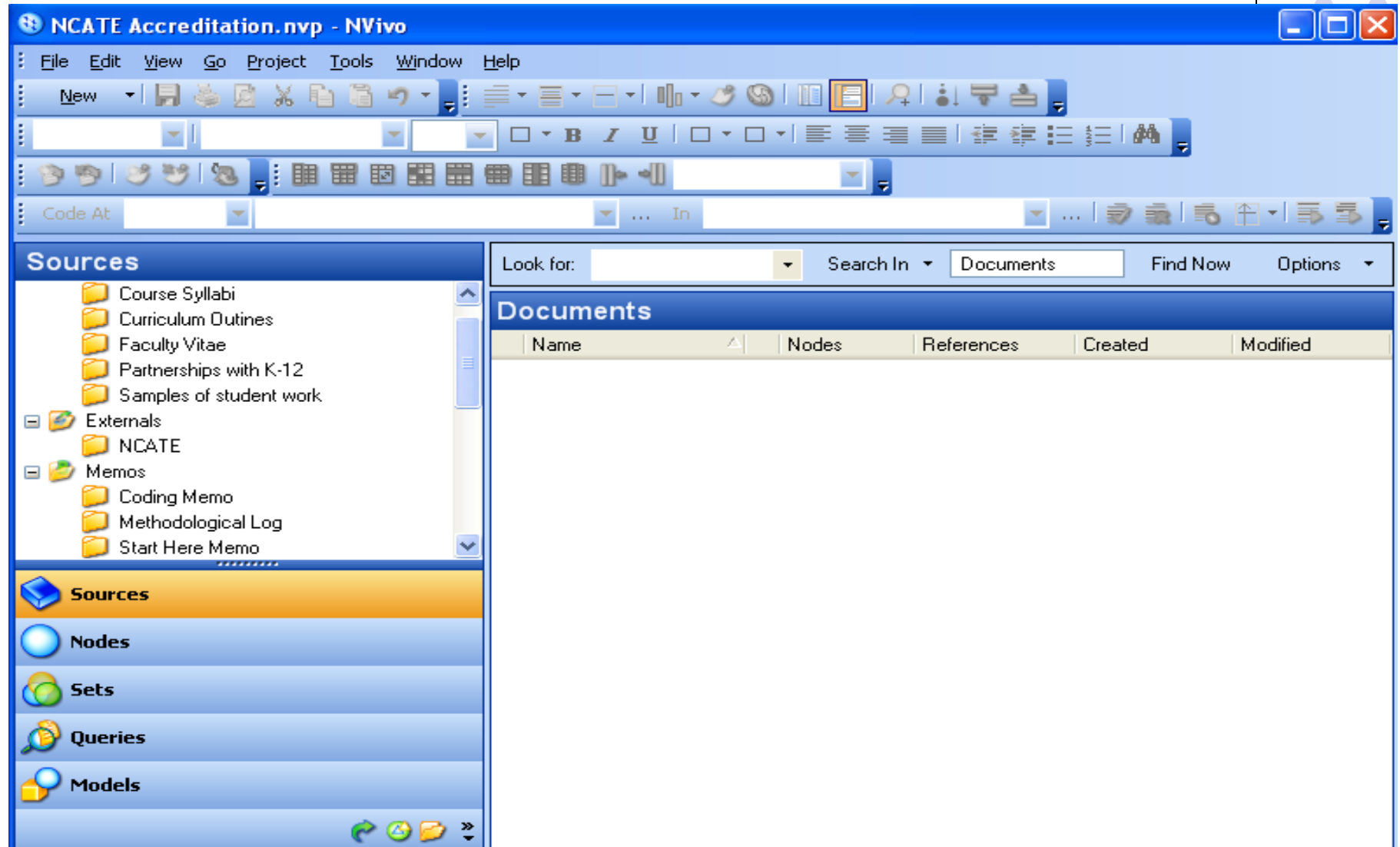
- NCATE (National Council for the Accreditation of Teacher Education)

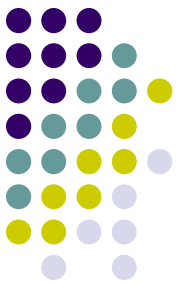
✓ University of Massachusetts Amherst
I&A (Spring 2008)

✓ University of Massachusetts Boston
I&A (Spring 2008)

✓ University of Massachusetts Lowell
I&A (Spring 2009)

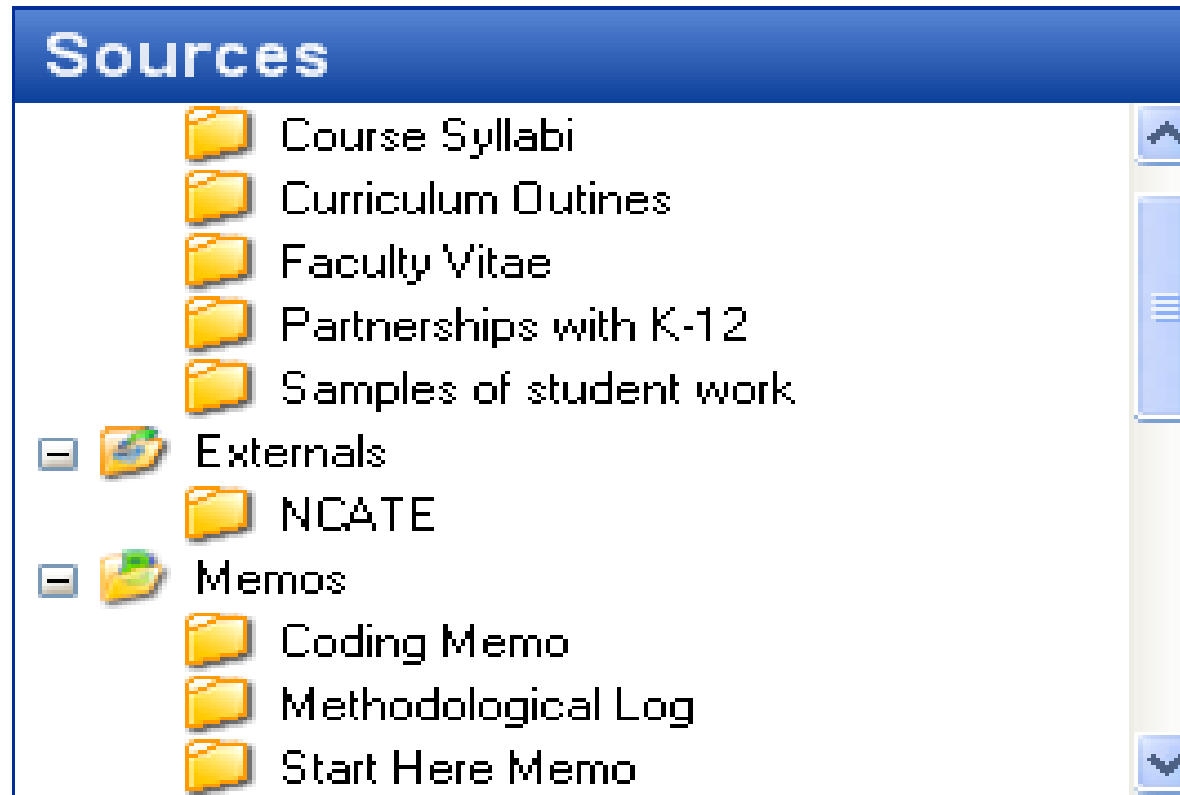
The Shell (Hickey 2006): NVivo As a Container



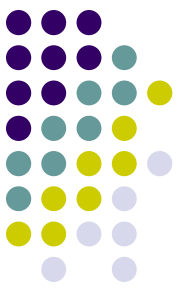


Nvivo as an Organizer

Sources

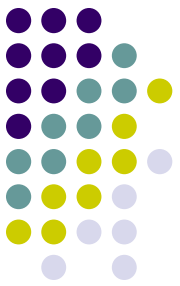


Nvivo as a tool for coding data












Tree Nodes			
	Name	Sources	
-	NCATE Unit Standards	0	
+	Standard 1 Candidate Knowledge,	0	0
+	Standard 2 Assessment Systems a	0	0
+	Standard 3 Filed Experiences and	0	0
+	Standard 4 Diversity	0	0
+	Standard 5 Faculty Qualifications,	0	0
+	Standard 6 Unit Governance and R	0	0
-	Evidence of Conceptual Framework	0	
	Candidate proficiencies aligned wi	0	0
	Coherence	0	0
	Commitment to Diversity	0	0
	Commitment to Technology	0	0
	Professional Commitments and Di	0	0
	Shared vision	0	0
-	Constituents	0	
	Alumni	0	0
	Community Partners	0	0
	Faculty	0	0
	staff	0	0
+	Students	0	0

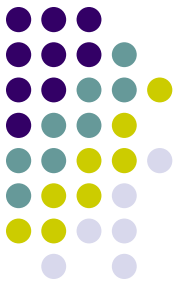
NVivo as tool to look at data through different lenses








Case Nodes

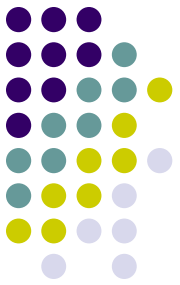
Cases			
	Name	Sources	References
	Programs	0	0
	Ed. D Language Arts and Literacy	0	0
	Ed. D Leadership in Schooling	0	0
	Ed. D Mathematics and Science E	0	0
	M. Ed Reading and Language	0	0
	M. Ed Educational Administration	0	0
	M.Ed Curriculum and Instruction	0	0
	M.Ed Curriculum and Instruction S	0	0
	M.Ed Educational Administration	0	0

Attributes



Attributes		
	Name	Type
	Graduates	Number
	mode of instruction	String
	Number of Full time Faculty	Number
	Students matriculated in program	Number
	Type of Degree	String

Nvivo as a tool for coding consistently

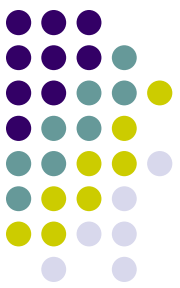


Defining Nodes (coding structure)

The screenshot shows the 'Tree Node Properties' dialog box in Nvivo. The 'General' tab is selected. The fields are filled with the following information:

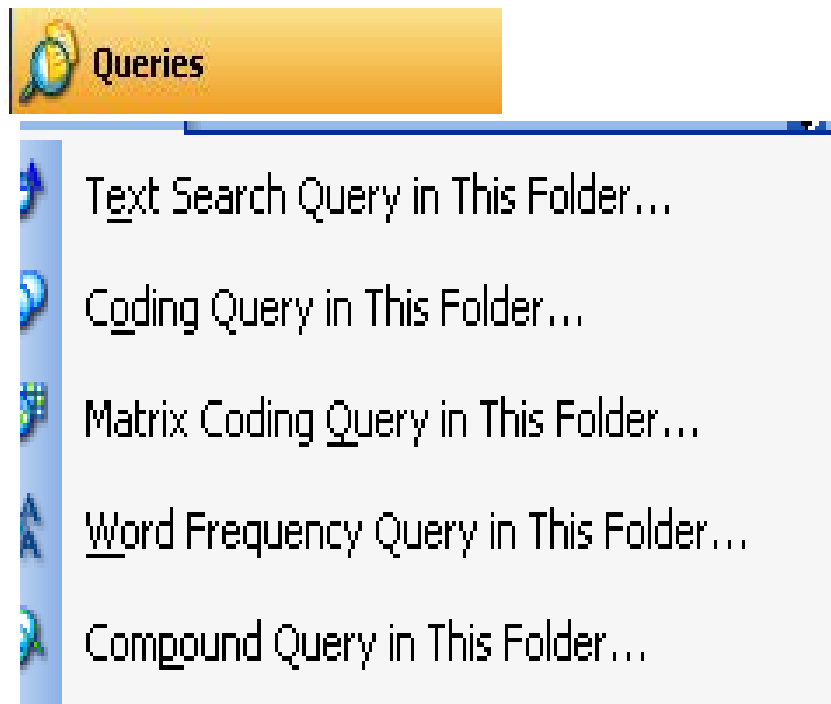
Field	Value
Name	Standard 1 Candidate Knowledge, skills and dispositions
Description	Candidates preparing to work in schools as teachers or other professional school personnel know and demonstrate the content, pedagogical and professional knowledge, skills, and dispositions necessary to help all
Nickname	
Hierarchical name	Tree Nodes\NCATE Unit Standards\Standard 1 Candidate
Created	3/15/2007 10:09 AM
Modified	3/15/2007 10:11 AM

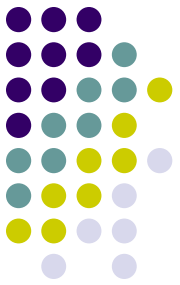
At the bottom right, there are 'OK' and 'Cancel' buttons.



Nvivo as a tool to question data

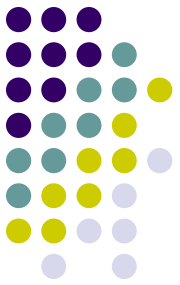
- Queries





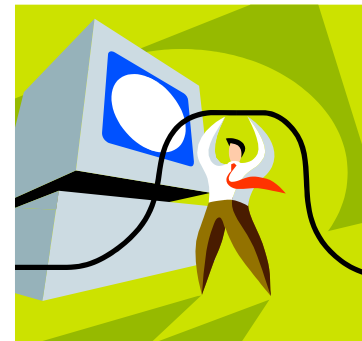
The benefits of using NVivo

- Transparency of data
- Storage of data electronically
- Portability
- Deeper analysis through queries

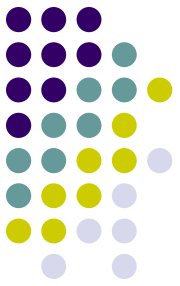


Conclusions

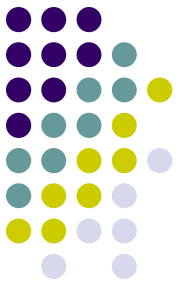
- QR software has great potential for use in higher education.
- QR software, like qualitative research, is complex and challenging.
- To do it well requires good support.



Individual Considerations...



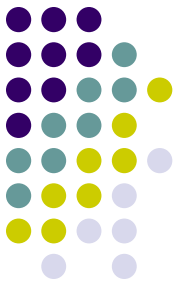
- Be prepared to address portability and transparency.
- Understand how to enact research design in QR software
- Make sure you get support to get beyond “code and retrieve”



Institutional Considerations

- Selection of Tool
- Site License
- Dedicated Tech Support
- Multiple Training Opportunities
- User Support groups
- Build mass...and leverage community
- Think flexibly about potential applications of these tools.

Contact Us!



We are glad to think with you about the use of qualitative research software.

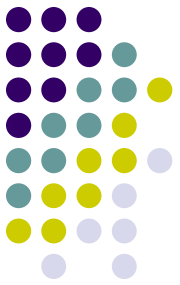
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