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Evaluating learner needs in the development of an online training website

Graham R Gibbs
With Celia Taylor (U. of Huddersfield) and Prof. Nigel Fielding and Ann Lewins (U. of Surrey)

Beyond the Boundaries: A one day conference in the School of Human and Health Sciences 17th July 2007
The Project: Online QDA

- In 2004-5
- Team at the University of Huddersfield and the University of Surrey
- ESRC funded
- Create a web site to provide training resources for those learning to use qualitative data analysis (CAQDAS) software.
User Needs

- 10 year experience of courses at CAQDAS suggested issues such as:
  - how to safeguard work done with s/w,
  - 'get out of trouble' help (e.g. suspected data loss but merely unfamiliarity with software),
  - 'how to do it' - prompts - needed to remind users what to do,
  - 'where to go next?', the user has forgotten a whole dimension of the software.
But - changing needs

- Software changing rapidly
- New users - some with no Qual. Res. or Soc. Sci. background
- So problems often unfamiliarity with QDA
- Many more users, especially u/g & master’s

Hence needed:
- a wide-ranging evaluation of learner needs to guide the design of the online resource.
Data gathering - 4 sources

- Written contributions to relevant online forums.
- Observation of volunteers using CAQDAS software.
- Interviews with 24 software users and trainers
- Online survey of qual researchers (n=250)
1. Written contributions to relevant online forums

- contributions made during the last 2 years to four Internet forums for CAQDAS users
- ATLAS.ti, MAXqda, QSR (for NVivo and N6) and QualSoftware
- Based on list server technology (via e-mail) and had been in operation for many years.
- Examined the last 2 years of messages (>2,000 messages)
Online forums

- Good for issues where users could state problem as a question
- Sometimes Ans. = simple function
- Sometimes advanced users with stretching questions
- Most common Q was what s/w to use for their project.
2. Interviews and Observations

- Observation of volunteers using CAQDAS software using think aloud protocols - 10 sessions at the U. Surrey
- Interviews with 24 software users and trainers. - users with differing levels of experience and expertise, and with different roles - PhD student, software trainer, researcher etc.
- Revealed some new kinds of learning issues.
Main issues in interviews and observations

- Coding schema and associated issues
  - Quite content with schema - but, what next?
  - Not happy with coding schema - what to do?
- Organisation of data - attributes, variables
- Integrating with quantitative data
- Simple retrieval of multiple codes at a time
- Selective retrieval (in some packages = ‘searching’)
- AND ‘Feeling stuck’ - what to do next
4. Online questionnaire survey

Asked:

- Respondent’s current position, job, discipline and level and experience of training in QDA and CAQDAS
- Current project and their use of CAQDAS
- What training priorities they had
Survey results

- Training priorities not useful. All issues got high scores
- Did indicate range of methods used and range of software used.
### Software used by those surveyed

<table>
<thead>
<tr>
<th>Principal software</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlas.ti</td>
<td>59</td>
<td>28.8</td>
</tr>
<tr>
<td>HyperRESEARCH</td>
<td>5</td>
<td>2.4</td>
</tr>
<tr>
<td>MAXqda</td>
<td>11</td>
<td>5.4</td>
</tr>
<tr>
<td>N4/N5/N6</td>
<td>38</td>
<td>18.5</td>
</tr>
<tr>
<td>QSR NVivo</td>
<td>64</td>
<td>31.2</td>
</tr>
<tr>
<td>Qualrus</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td>winMAX</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td>Other (incl. Alceste, AQUAD, EZ-text, QDA Miner, Qualifiers, Ethnograph, Transanna, Word, WordStat.)</td>
<td>20</td>
<td>9.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>205</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
**Current principal discipline**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>48</td>
</tr>
<tr>
<td>Other</td>
<td>37</td>
</tr>
<tr>
<td>Psychology</td>
<td>30</td>
</tr>
<tr>
<td>Sociology</td>
<td>28</td>
</tr>
<tr>
<td>Anthropology</td>
<td>20</td>
</tr>
<tr>
<td>Health</td>
<td>15</td>
</tr>
<tr>
<td>Social Policy</td>
<td>11</td>
</tr>
<tr>
<td>Management</td>
<td>8</td>
</tr>
<tr>
<td>Geography</td>
<td>5</td>
</tr>
<tr>
<td>Nursing</td>
<td>5</td>
</tr>
<tr>
<td>Politics</td>
<td>5</td>
</tr>
<tr>
<td>Social Work</td>
<td>5</td>
</tr>
<tr>
<td>Medicine</td>
<td>4</td>
</tr>
<tr>
<td>Economics</td>
<td>3</td>
</tr>
<tr>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Business</td>
<td>2</td>
</tr>
<tr>
<td>Criminology</td>
<td>2</td>
</tr>
<tr>
<td>History</td>
<td>2</td>
</tr>
<tr>
<td>Architecture</td>
<td>1</td>
</tr>
<tr>
<td>Physical Education</td>
<td>1</td>
</tr>
<tr>
<td>Social Administration</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>236</td>
</tr>
</tbody>
</table>
## Current principal method

<table>
<thead>
<tr>
<th>Method</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grounded Theory</td>
<td>53.8</td>
</tr>
<tr>
<td>Ethnography</td>
<td>28.0</td>
</tr>
<tr>
<td>Action Research</td>
<td>23.3</td>
</tr>
<tr>
<td>Narrative analysis</td>
<td>22.0</td>
</tr>
<tr>
<td>Discourse Analysis</td>
<td>20.8</td>
</tr>
<tr>
<td>Constructivism</td>
<td>15.7</td>
</tr>
<tr>
<td>Conversation analysis</td>
<td>12.7</td>
</tr>
<tr>
<td>Life history/Biography</td>
<td>12.7</td>
</tr>
<tr>
<td>Symbolic Interactionism</td>
<td>9.3</td>
</tr>
<tr>
<td>Phenomenology</td>
<td>8.9</td>
</tr>
<tr>
<td>Interpretive Phenomenological Analysis</td>
<td>8.5</td>
</tr>
<tr>
<td>Framework method</td>
<td>6.8</td>
</tr>
</tbody>
</table>
Summary - Major concerns

- Problems with analysis
  - A need for basic qualitative analysis methods training
  - More pointers to available literature

- Software issues or QDA issues?
  - Misunderstanding or discord about nature of QDA work and role of software
  - ‘Grey areas’ where software ends and analysis ‘kicks in’

- Frustration with s/w because of limited experience or awareness

- Technology in the driving seat
  - Software influencing methodological approach
Website design issues - General

- Allow for people new to QDA and/or CAQDAS - Different levels of user
- Fast access to required info
- Easy-to-use interface
- Reliable, serious content, but not too much text
- Format suitable for the medium
Website design issues - Specific

- Support for variety of theoretical approaches (text and resources)
- Glossary for those new to QDA
- Step-by-step for most frequently used CAQDAS
- Advanced CAQDAS topics based on common questions
- Allow for non CAQDAS approaches
- Introduction for ‘types’ of user
Types of user

- Complete beginner
- Thinking of using software
- Just starting with software
- Problems using the software
Good and bad points of evaluation

- E-mail lists
  - Only good if problem is ‘statable’ and answerable by e-mail
  - But identified s/w choice as an issue
- Interviews and observations
  - Good at intimate issues of learning and difficulties
  - Some solutions beyond a website
- Survey
  - Said Yes to everything!
  - But did point out range of users
Conclusions

- All too often, e-learning is a costly technology solution in search of a problem.
- User Needs evaluation does at least identify where *real* problems are.
- Even simple approaches (e-mail lists), though arduous, can produce some answers.
Site usage

Average of 620 distinct visitors per day in the last month
Online QDA standard page

Software tools

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Affiliation: ¹University of Huddersfield and ²University of Surrey
Date written: 14th Nov 2005

Coding

Coding involves identifying words/phrases/lines/sentences/passages of text in a document or an image or part of an image that represents an idea or concept. This is then linked to a named code that represents that idea or concept. This shows that it shares the characteristics indicated by the code and/or its definition with other similarly coded passages or texts. All the passages and images associated with a code can be examined together and patterns identified. Programs differ in how they support coding (including in vivo coding, and code creation) and how they manage to show coded segments in context.

Codes can be arranged non-hierarchically (free codes) as a simple list. This enables nodes to be created without having to worry immediately about how they relate to other codes. The codes can also be arranged as a hierarchy (tree) with a branching arrangement of codes. Ideally, child codes in a tree relate to their parent codes by being 'examples of...', or 'contexts for...' or 'causes of...' or 'settings for...' and so on. Most CAQDAS packages allow flat and tree (hierarchical) coding, but some software, though they principally allow for flat coding, do allow you to make collections of codes or draw connections between them that allow for types of hierarchical approach.

Auto-coding

The function in some CAQDAS programs to code the results of a search for words or phrases in the text itself, e.g. in MAXqda and Atlas.ti this is an option. In NVivo and Nud.iSt by default, searches produce a new node.