کارگاه تحلیل داده‌های کیفی با کمک نرم افزار MAXQDA10

مدرس و تسهیلگر
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What is qualitative data analysis?

- Analysis is the process of making sense out of the data
- Consolidate, reducing and interpretation

Suggestions for data analysis

(Bagdan & Biklen, 2007)

- Narrow the study
- Identify type of study
- Develop analytic questions
- Plan data collection session according to what found in previous session
- Write “memo” about what you are learning
- Tryout ideas and themes on participants
- Begin exploring the literature while in the field
- Play with metaphors, analogies, concepts
- Use visual devices

Four Components needed for Data analysis

- Theoretical framework
- Research questions
- Concepts derived from the literature review
- Initial insights
- The data(IDI, FGD, field notes, …)

Type of qualitative design

- Identify the type of qualitative design we used
  - Thematic content analysis
  - Grounded Theory
  - Interpretive phenomenological analysis
  - Narrative analysis
  - ….

Stages of Qualitative Analysis

- Reading for Overall Understanding
- Coding Qualitative Data
- Developing the Code Structure
  - Grounded Theory Approach
  - More Deductive Approaches
  - An Integrated Approach
- Finalizing and Applying the Code Structure

Reading for Overall Understanding

- 1st step: Immersion in the data to comprehend its meaning in its entirety.
- Reviewing data without coding helps identify emergent themes without losing the connections between concepts and their context.

Source: (Crabtree and Miller 1999; Pope, Ziebland, and Mays 2000)

Coding

- Codes are tags or labels, which are assigned to whole documents or segments of documents (i.e., paragraphs, sentences, or words) to help catalogue key concepts while preserving the context in which these concepts occur. (Miles and Huberman 1994)
- The coding process includes development, finalization, and application of the code structure

Table 2: Code Types and Applications

Code Types	*Characterization*	*Application/Purpose*
Conceptual codes/subcodes	Key conceptual domains and essential conceptual dimensions of the domains	Developing taxonomies; useful in themes and theory
Relationship codes	Links among conceptual codes/subcodes	Generating themes and theory
Participant perspective	Directional views (positive, negative, or indifferent) of participants	Generating themes and theory
Participant characteristics	Characteristics that identify participants, such as age, gender, insurance type, socioeconomic status, etc.	Comparing key concepts across types of participants
Setting codes	Characteristics that identify settings, such as intervention versus nonintervention group, fee-for-service versus prepaid insurance, etc.	Comparing key concepts across types of settings

Categories

Should be:

- Responsive to the purpose of the research (e.g. answer)
- Be exhaustive (enough categories to encompass all relevant data)
- Be mutually exclusive (a relevant unit of data can be placed in only one category)
- Be conceptually congruent (all categories are all the same conceptual level)

How many category?

- Should be manageable
- The fewer the higher level of abstraction , greater ease to communicate finding with others
- To work with 25-30 categories early in the analysis ,
- Reduce and combine into 5-6 to write narrative

Developing the Code Structure

- An iterative and lengthy process
- Begins in the data collection phase.
- Substantial diversity in how to develop the code structure.
- Debate inductive coding or deductive(Glaser 1992; Heath and Cowley 2004)
- Regardless of approach, a well-crafted, clear, and comprehensive code structure promotes the quality of subsequent analysis (Miles and Huberman, 1994).

Grounded Theory Approach to Developing Code Structure

- Data are reviewed line by line in detail and as a concept becomes apparent, a code is assigned.
- Upon further review of data, the analyst continues to assign codes that reflect the concepts that emerge, highlighting and coding lines, paragraphs, or segments that illustrate the chosen concept.
- As more data are reviewed, the specifications of codes are developed and refined to fit the data.

Grounded Theory Approach to Developing Code Structure(cont.)

- To ascertain whether a code is appropriately assigned, the analyst compares text segments to segments that have been previously assigned the same code and decides whether they reflect the same concept.
- Using this ‘‘constant comparison’’ method (Glaser and Strauss 1967), the researchers refine dimensions of existing codes and identify new codes.
- Through this process, the code structure evolves inductively, reflecting ‘‘the ground,’’ i.e., the experiences of participants.

More Deductive Approaches to Developing Code Structure

- Initial step defines a structure of initial codes before line-by-line review of the data.
- Preliminary codes can help researchers integrate concepts already well known in the extant literature.
- For example, a deductive approach of health service use might begin with predetermined codes for predisposing, enabling, and need factors based on the behavioral model (Andersen 1995).

An Integrated Approach to Developing Code Structure

- An integrated approach employs both inductive (ground-up) development of codes as well as a deductive organizing framework for code types (start list).

Finalizing & Applying the Code Structure

- The codes and code structure can be considered finalized at the point of "Theoretical Saturation"

(Glaser and Strauss 1967; Glaser 1992; Patton 2002).

- This is the point at which no new concepts emerge from reviewing of successive data from a theoretically sensitive sample of participants,
  - i.e., a sample that is diverse in pertinent characteristics and experiences.

Applying the Finalized Code Structure

Two approaches:

1.
   - Two to three members of the research team re-review all the data, applying independently the codes from the finalized code structure.
   - Then, the team review discrepancies, resolving differences by in-depth discussion and negotiated consensus.
   - The result is a single, agreed upon application of the final codes to all parts of the data. This approach is reasonable and frequently used in the published literature.

2.
   - To establish the reliability of multiple coders from the research team with a selected group of data.
   - Once coders have been established to be reliable with one another, one of the coders completes the remainder of the coding independently.

Inter-coder reliability

- Inter-coder reliability (Miles and Huberman 1994) can be evaluated by selecting new data (for instance, two to three transcripts that were not analyzed) having two researchers code these data, using the finalized code structure.
- The two researchers code the transcripts independently and compare the agreement on coding used.
- One calculates the percentage of all segments coded, which are coded with the same codes, and some experts (Miles and Huberman 1994) have proposed 80 percent agreement as a rule of thumb for reasonable reliability.

Generating Results

- Three types of output from qualitative studies:
  - Taxonomy
  - Themes
  - Theory
- These outputs can be helpful in :
  - the fostering of improved measurement of multifaceted phenomenon;
  - the generation of hypotheses about causal links among service quality, cost, or access; and
  - the revealing of insights into how the context of an events might influence various outcomes

Table 1: Selected Types of Results from Qualitative Data Analysis

Results	*Definition*	*Application/Purpose*
Taxonomy	Formal system for classifying multifaceted, complex phenomena according to a set of common conceptual domains and dimensions	Increase clarity in defining and comparing complex phenomena
Themes	Recurrent unifying concepts or statements about the subject of inquiry	Characterize experiences of individual participants by general insights from the whole of the data
Theory	A set of general propositions that help explain, predict, and interpret events or phenomena of interest	Identify possible levers for affecting specific outcomes; guide further examination of explicit hypotheses derived from theory

Taxonomy, Themes, and Theory
Elizabeth H. Bradley, Leslie A. Curry, and Kelly J. Devers
Health Research and Educational Trust
DOI: 10.1111/j.1475-6773.2006.00684.x

Taxonomy

- A system for classifying multifaceted, complex phenomena according to common conceptual domains and dimensions.
- Conceptual codes define key domains that characterize the phenomenon;
- Conceptual subcodes define common dimensions within those key domains.
- Within each dimension, there may be further sub dimensions depending on the complexity of the inquiry. Importantly, taxonomies identify domains and dimensions that are broad in nature.

Example of Taxonomy

- In a taxonomy classifying quality improvement (Bradley et al. 2001), six domains defined that comprise quality improvement efforts in the hospital setting:
  - organizational goals,
  - administrative support,
  - Clinician leadership,
  - performance improvement initiatives,
  - use of data,
  - Contextual factors.
- Within the domain of organizational goals, there were four dimensions
- (i.e., content, specificity, challenge, sharedness of the goals).
- For each domain and dimension, the code represents the abstract concept, not the specific statement about that concept.
- For instance, a domain might be ‘‘nursing leadership,’’ as opposed to the statement, ‘‘there is strong nursing leadership here.’’

Example: Taxonomy

- **A qualitative study of increasing beta-blocker use after myocardial infarction: Why do some hospitals succeed?**
- **Authors**
- Bradley EH, Holmboe ES, Mattera JA, Roumanis SA, Radford MJ, Krumholz HM.
- **Journal**
- JAMA. 2001 May 23-30;285(20):2604-11.

Theme

- Themes are general propositions (plan) that emerge from diverse and detail-rich experiences of participants and provide recurrent and unifying ideas regarding the subject of inquiry.
- Themes typically evolve not only from the conceptual codes and subcodes as in the case of taxonomy but also from the relationship codes, which tag data that link concepts to each other.

Theme

For example:

- In a study of health services integration (Gillies et al. 1993), three concepts were identified that might form a taxonomy of integration approaches:
  - Functional integration,
  - Physician integration,
  - Clinical integration.
- However, the study also suggests that clinical integration requires success in function and, ideally, physician integration before full clinical integration can be achieved. This latter statement might be called a theme, a statement or proposition about how health system integration proceeds.

Theme

- Another approach to developing themes is to conduct a comparative analysis of concepts coded in different participant groups or setting codes.
- The researcher retrieves data coded with both a conceptual or relationship code and with a participant characteristic code (e.g., fee-for-service Medicare versus traditional Medicare).
- The comparison can assess whether certain concepts, relationships among concepts, or positive/negative perspectives are more apparent or are experienced differently in one group than in another.

Theory

- Emphasizes the nature of correlative or causal relationships, often delving into the systematic reasons for the events, experiences, and phenomena of inquiry.
- Theory predicts and explains phenomena (Kaplan 1964; Merton 1967; Weick 1995).
- Data tagged by relationship codes are essential to generating and reporting theory.
- A comprehensive theory will integrate data tagged with conceptual codes and sub-codes as well as with relationship and perspective codes.
- Comparative analysis about group-specific differences is sometimes used to develop theory

Example: Theory

DOI: 10.1111/j.1475-6773.2005.00455.x

Parent-Identified Barriers to Pediatric Health Care: A Process-Oriented Model

Elisa J. Sobo, Michael Seid, and Leticia Reyes Gelhard

Theory

Example:

- parents identified a set of six barriers for use of critical pediatric services.
- The study linked these barriers into a theory about the interaction of necessary skills and prerequisites, realization of access, the site of care, and parent/patient outcomes.
- Through its theoretical development, the study also suggests a new paradigm for understanding the biomedical health care system, likening it to a cultural system in which parents and patients needed to learn (or be acculturated) to function competently.

An example

(Blankenship, 1991)

- Factors influencing entry and completion /non completion

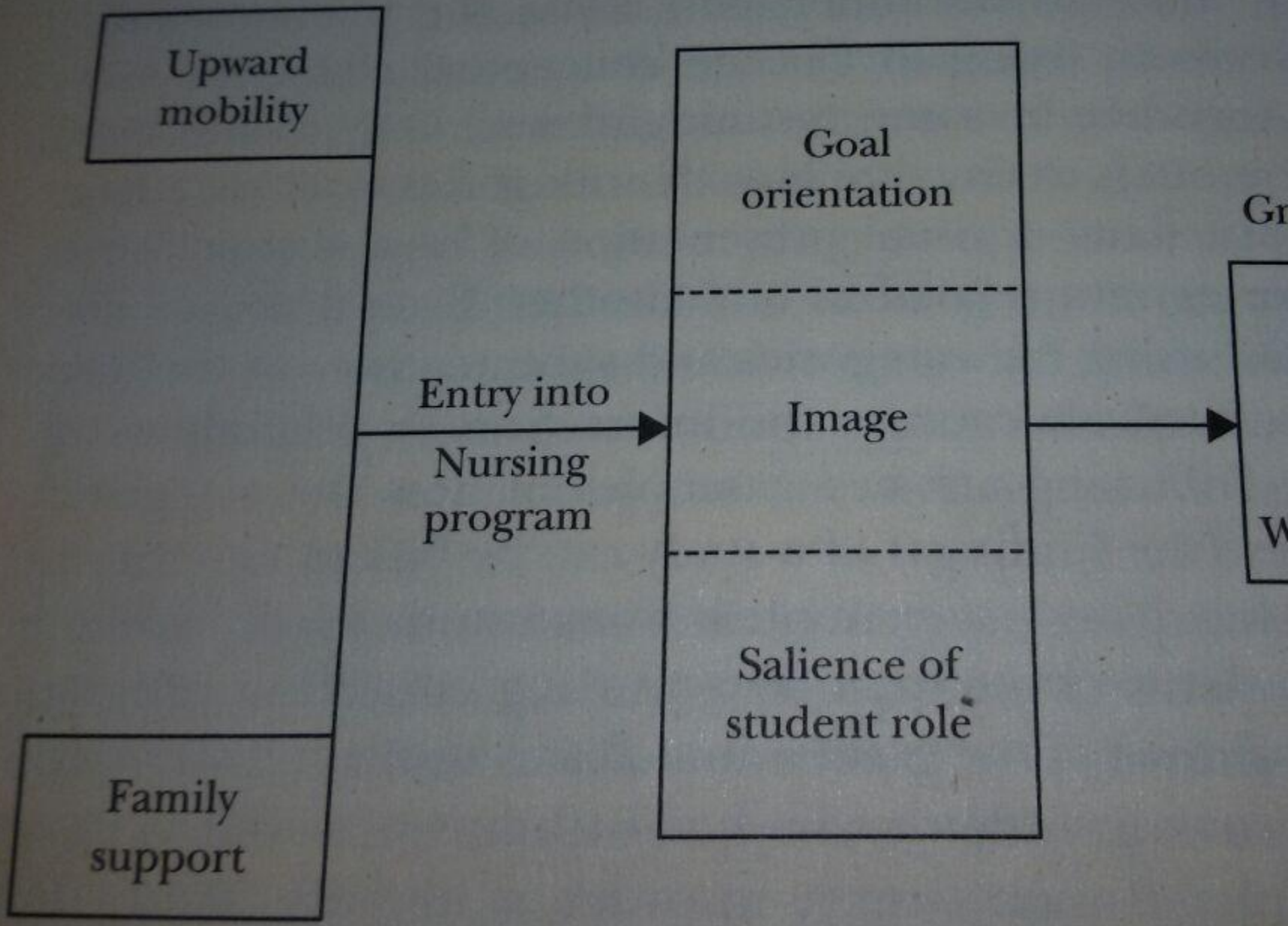
Entry factors

- A. Upward Mobility
- B. Family Support

Completion factors

- A. Goal orientation
  - 1. Clarity
  - 2. Proximity
- B. Image
  - 1. Nursing
  - 2. Self as nurse
- C. Salience of students role

FIGURE 8.3. MODEL TO EXPLAIN ENTRY AND PERSISTENCE IN NURSING



Finally

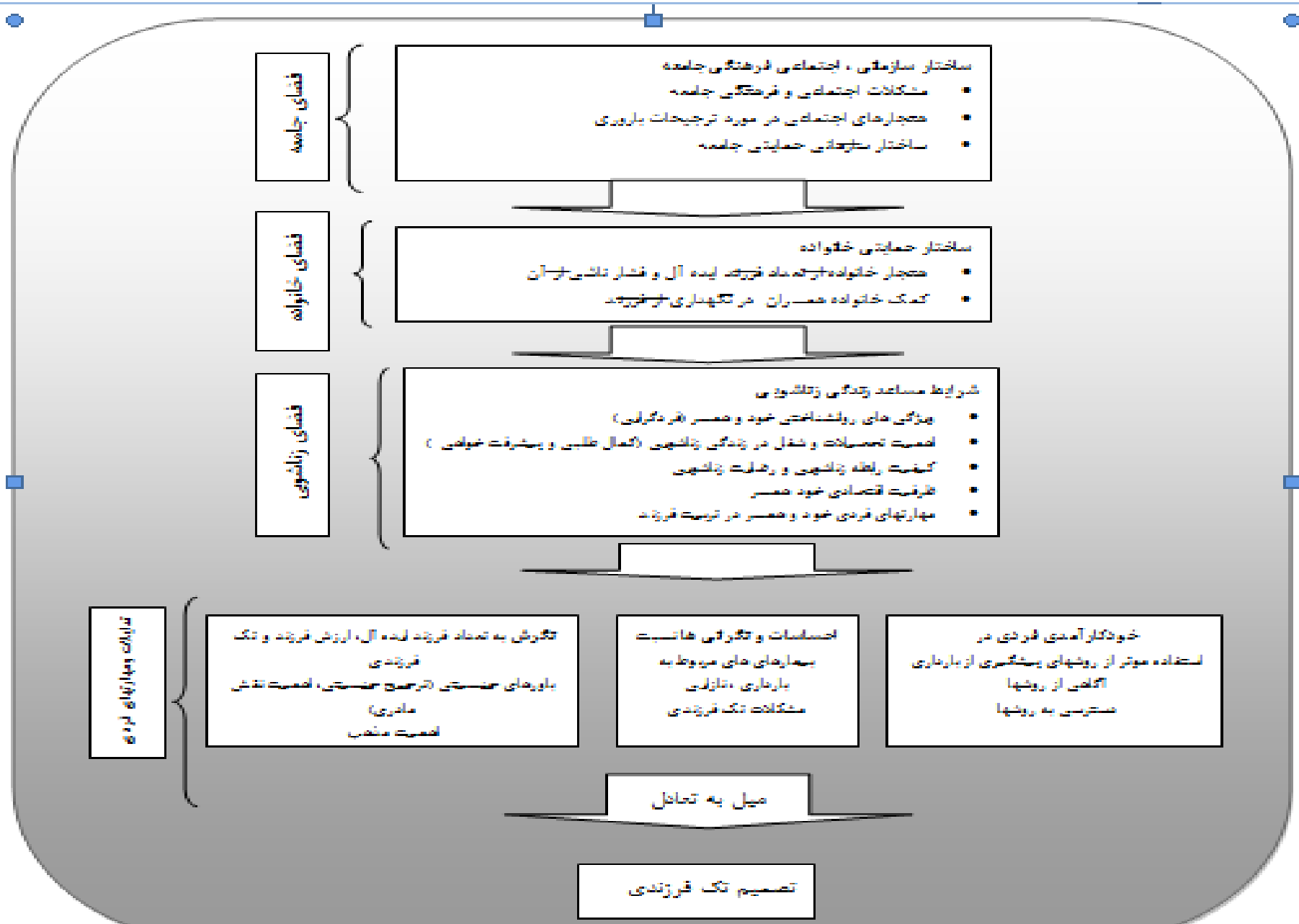
- Whether and how the demographic characteristics of the sample are incorporated into the data analysis?
- E.g.,
- Participant gender sexual orientation, social class, work status, marital status, other factors are considered in developing codes and emergent themes

مثال : همخانگی؛ پیدایش الگوهای نوین خانواده در تهران

مفاهیم (کدگذاری باز سطح اول)	مفاهیم (کدگذاری باز سطح دوم)	مقولات عمده	مقوله هسته
۱- گسترش نظام سرمایهداری ۲- افزایش ناامنی شغلی	تغییرات اقتصادی	تغییرات برون ساختار (جهانی شدن)	تنظیمات اجتماعی در حال گذار
۳- بازاندیشی؛ آرمانزدایی از سنت ٤- پیدایش ارزشهای جدید ٥- افزایش ارزش استقلال و آزادی فردی ٦- لیبرالیسم اخلاقی ۷- احساس آنومی ۸- شکلگیری گرایشهای روشنفکرانه ۹- الگوهای جدید همسریابی	تغییرات فرهنگی		
۱۰- ورود رسانههای جهانی؛ (ماهواره، اینترنت) ۱۱- افزایش امکانات ارتباط شخصی و پنهان: (تلفن همراه، چت، اس ام اس) ۱۲- آموزش مدرن (گسترش دانشگاهها) ۱۳- کلان شهرنشینی و فرصت گمنامی	ورود عناصر نوسازی		
۱٤- ورود دختران به عرصههای اجتماعی (دانشگاه و محیط کار) ۱٥- تسهیل روابط دختر و پسر ۱٦- افزایش سن ازدواج ۱۷- افزایش طلاق ۱۸- کاهش کنترل خانواده بر فرزندان ۱۹- شکاف نسلی ۲۰- شبکه گروههای دوستی سوژه	تغییرات خانواده	تغییرات درون ساختار	

تک فرزندی ، راهکاری برای ایجاد تعادل بین الزامات فردی ، خانوادگی و محیطی					درون مایه اصلی
٤. فضای جامعه	۳. فضای خانواده	۲. فضای زناشویی	۱. تمایلات و مهارتهای فردی		درون مایه فرعی
٤,۱ ساختار حمایتی سازمانی اجتماعی فرهنگی جامعه	۳,۱ ساختار حمایتی خانواده	۲,۱ شرایط مساعد زندگی زناشویی	۱,۳ خودکارآمدی فردی در کنترل باروری	۱,۲ احساسات و نگرانی ها	۱,۱ باورها، نگرش ها و ادراکات	طبقه اصلی
• مشکلات اجتماعی و فرهنگی جامعه • هنجارهای اجتماعی در مورد ترجیحات باروری • ساختار سازمانی حمایتی جامعه	• هنجار خانواده و فشار ناشی از آن • کمک خانواده همسران در نگهداری از فرزند	• ویژگی های روانشناختی خود و همسر • اهمیت تحصیلات و شغل در زندگی زناشویی (کمال طلبی و پیشرفت خواهی) • کیفیت رابطه زناشویی و رضایت زناشویی • ظرفیت اقتصادی خود همسر • مهارتهای فردی خود و همسر در تربیت فرزند	• استفاده موثر از روشهای پیشگیری از بارداری • سابقه سقط • آگاهی از روشهای پیشگیری • دسترسی به روشهای پیشگیری	• ترس از ظهور بیماری های مربوط به بارداری و عوارض بارداری • ترس از نازایی • ترس ها و نگرانی ها از تک فرزندی	• نگرش نسبت به فرزند آوری و مفهوم فرزند • نگرش منفی به تک فرزندی • اعتقاد به مزایای تک فرزندی • بارورهای جنسیتی شامل ترجیح جنسیتی و اهمیت نقش مادری در مقابل نقش های اجتماعی • پایبندی به مذهب	زیر طبقه های اصلی

درون مایه ها و طبقات استخراجی مربوط به عوامل موثر بر تصمیم تک فرزندی در سطوح مختلف



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Qualitative and Mixed Methods Research

Full support for PDF and DOC files

- In addition to handling the RTF format, many new formats can now be directly imported and coded, including **PDF**, DOC and image files.

Search bars in every window

- Quickly search for that code, document, text segment, or coding. MAXQDA 10 now offers you a **search function in a handy bar** located in all four major windows

Improved user interface

- MAXQDA 10 has many new aspects that make it even easier to handle. These include :
  - toolbars that can be dragged anywhere on your screen,
  - the option of having several documents open in separate tabs,
  - optional color highlighting of coded segments, and much more.

Audio and video files linked to transcripts

- With the integration of a media player in MAXQDA 10, it is now possible to **link audio and video files with transcribed text**. With the help of time stamps visualized in the Document Browser, you can play back the original file to help in your analysis.

MAXMaps models

- MAXQDA 10 makes it even easier to **find and visualize connections in your data set**. The five prepared models make it possible to automatically create a visualization of your data with a few mouse clicks.

Mixed methods functions

- There has always been a focus on mixed methods in the development of MAXQDA, but the newest version takes the program to the next level. With the new code variables, the Quote Matrix, and the Typology Table, there are even more options for **combining and analyzing both your qualitative and quantitative data** in a meaningful way

Coding of images

- MAXQDA 10 now makes it possible for you to analyze pictures as well as text. Images can be imported just like text files. By clicking and dragging on the picture, you can create a box around a section of that image that you want to code. This section of the picture is then shown when called up via the retrieval function.

Expanded memo functionality

- There are now new formatting options for memo text to allow, for example, for lists and special indent formatting. It is also now possible to easily compare your memos with the new tabbed viewing, so you can have many memos open at the same time.

Spatial connections with geo-referencing

- With the geo-referencing function, you can **connect any part of a text or code with a place on Google Earth™**!

GEO-LINKING

MAXQDA Meets Google Earth™

- Want to show how today's mobility influences the structure of family life?
- Want to analyze how geographical circumstances affect peoples' lives and attitudes (community research)?
- Want to track or visualize the impact of city planning on peoples' lives?
- Want to track and visualise peoples' paths in order to show changes in their social and physical environment and understand related social and/or physical challenges?

Reasons for Geo-Linking

There are many reasons why many qualitative researchers will be glad to finally have a tool that allows them to deal with such topics with a whole new level of professionalism. MAXQDA is the first software for Qualitative Data Analysis that allows researchers to connect geographical references (e.g in Google Earth™) smoothly to their project data. On June 24, 2008 we introduced the free MAXQDA update providing GeoLinks.

QUICK LAUNCH

Purchase MAXQDA

Download Demo

What is MAXQDA?

Why MAXQDA?

Video tutorials

Frequently Asked Questions

MAXQDA Meets Google Earth™

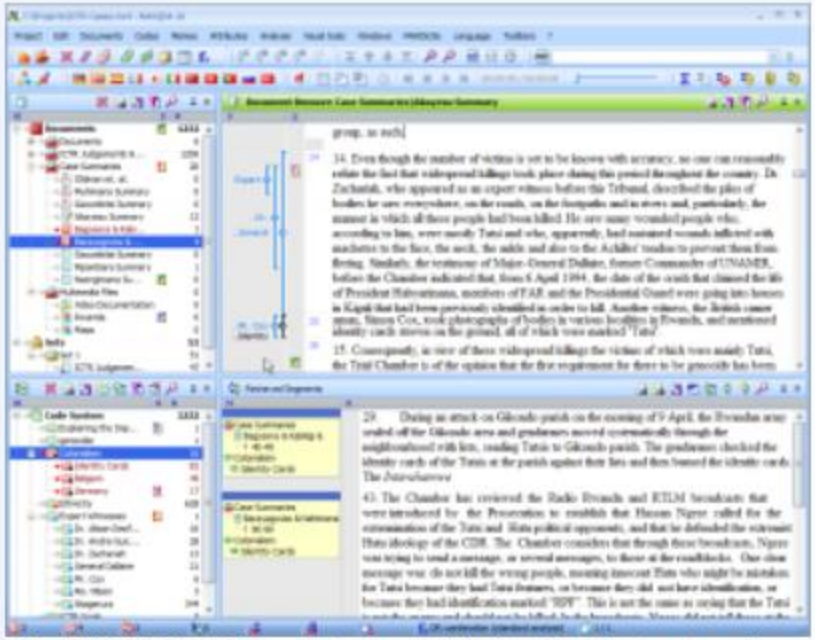
- Want to show how today's mobility influences the structure of family life?
- Want to analyze how geographical circumstances affect peoples' lives and attitudes (community research)?
- Want to track or visualize the impact of city planning on peoples' lives?
- Want to track and visualise peoples' paths in order to show changes in their social and physical environment and understand related social and/or physical challenges?

Expanded Teamwork Functionality

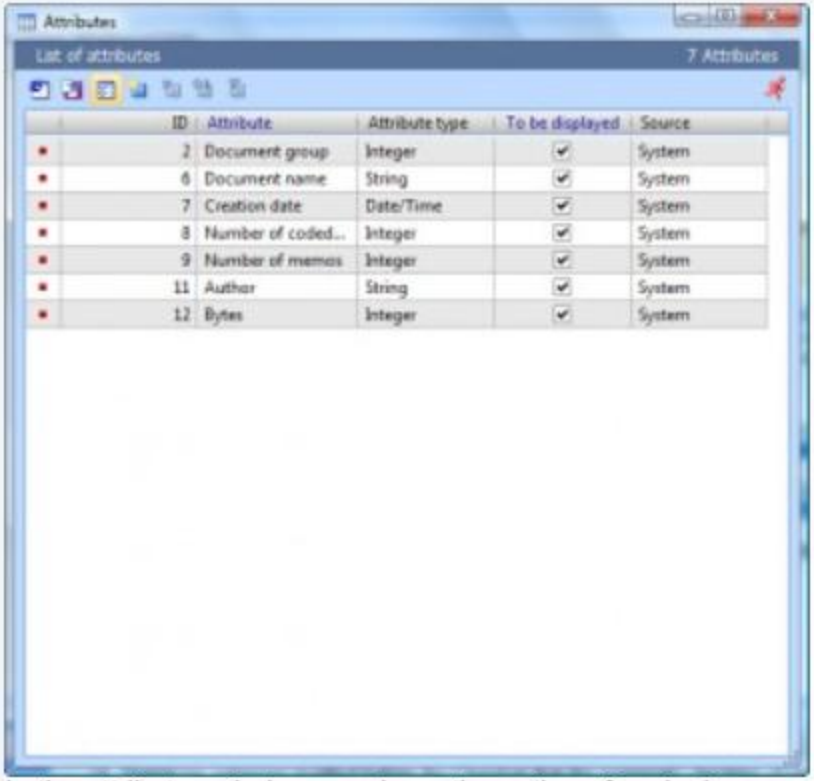
- It is now possible to compare the coding of two independent coders of the same document in MAXQDA 10 with the **Intercoder Reliability function.**
- An interactive table displays exactly where codings do not overlap, so these segments can be discussed in a team, and code definitions can then be altered or made more precise to enhance intercoder reliability

Some Screenshot in MAXQDA10

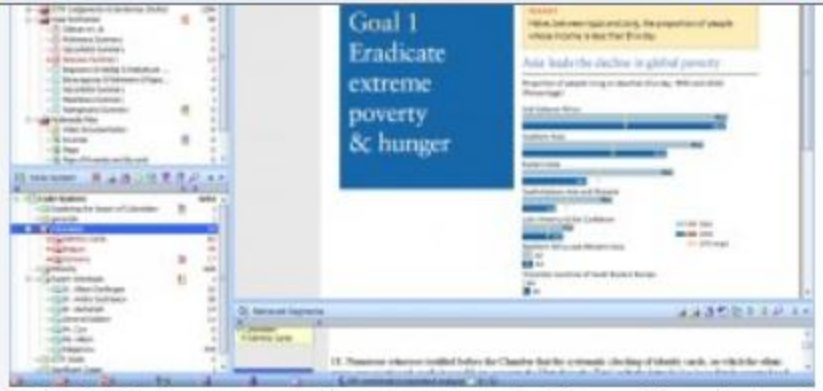
Overview



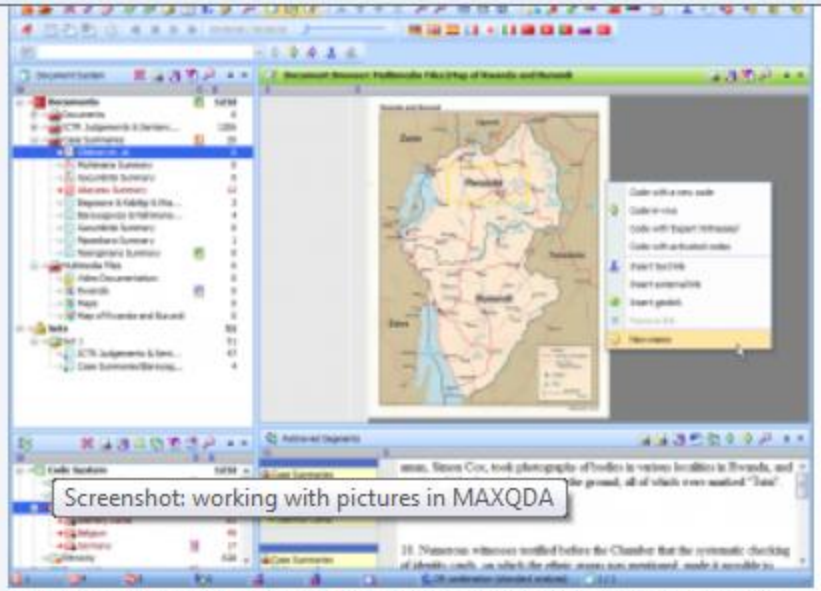
The MAXQDA 10 User Interface with the clearly-structured, easy-to-use four-window structure.



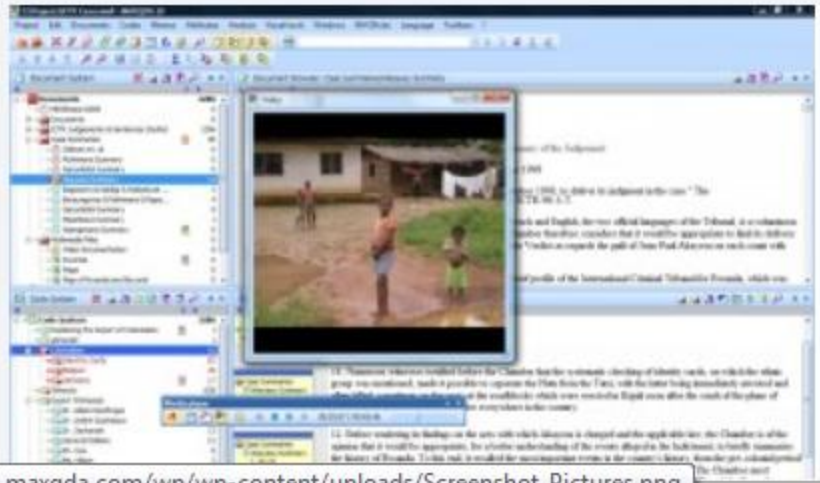
In the attributes window, you have the option of assigning attributes to any imported document.

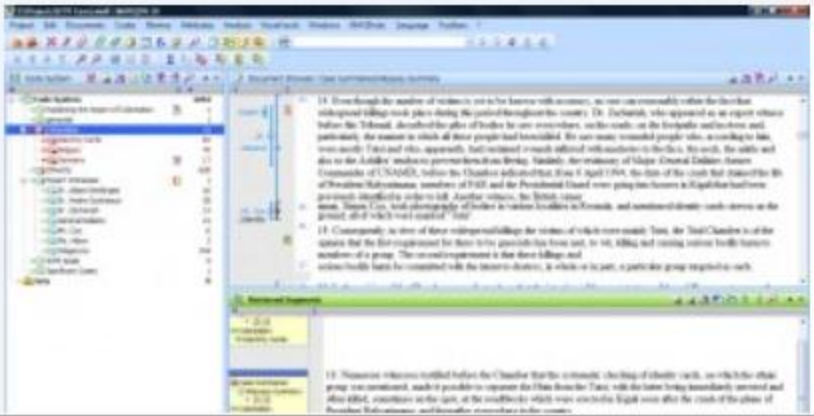


MAXQDA allows you to import and work with a wide variety of different file formats, such as .pdf, .doc, .docx, .rtf, and .txt.



In the new version MAXQDA 10, you can now code whole or parts of pictures.



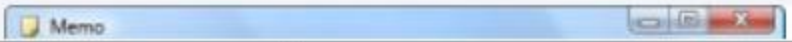


The new MAXQDA media player allows you to play, transcribe and code multimedia files.

This view shows the Code System and the text wherein a text segment is being coded with the code “Öffentlichkeit”.

You can quickly find all coded segements with the help of the text retrieval function.

With the search function, you can find specific words, phrases, or characters and then export or code them automatically.



You can quickly find all coded segements with the help of the text retrieval function.

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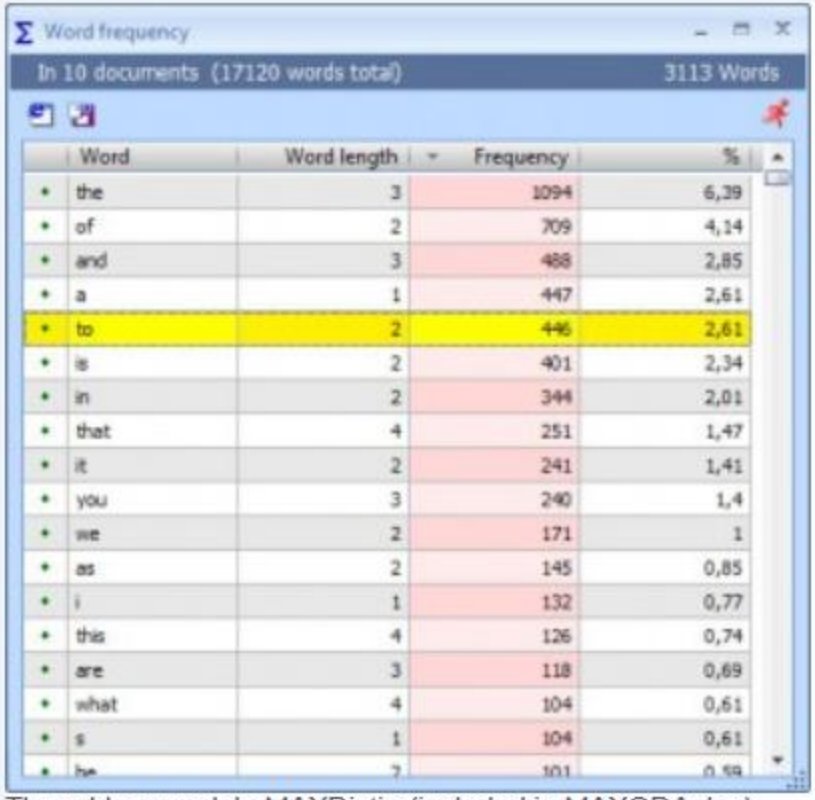
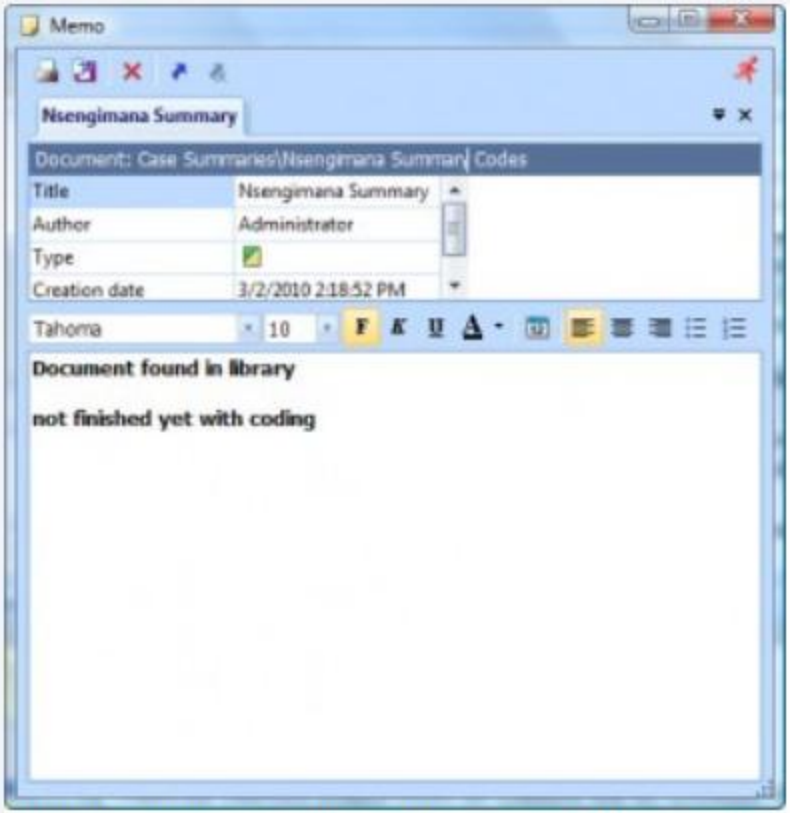


Word	Word length	Frequency	%
the	3	1094	6,39
of	2	709	4,14
and	3	488	2,85
a	1	447	2,61
to	2	446	2,61
is	2	401	2,34
in	2	344	2,01
that	4	251	1,47
it	2	241	1,41
you	3	240	1,4
we	2	171	1
as	2	145	0,85
i	1	132	0,77
this	4	126	0,74
are	3	118	0,69
what	4	104	0,61
s	1	104	0,61
be	2	101	0,59

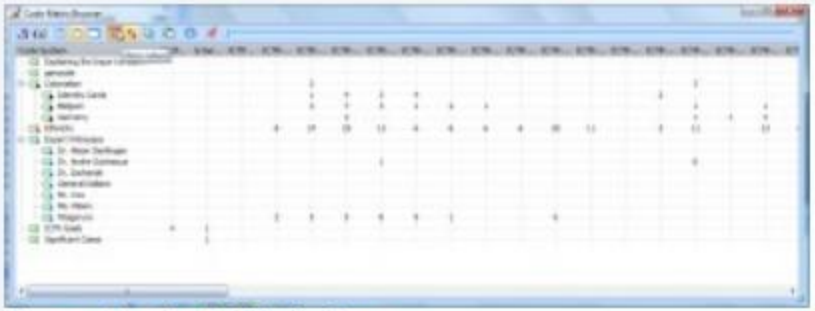
The add-on module MAXDictio (included in MAXQDAplus) makes it possible to do dictionary-based quantitative content analysis.



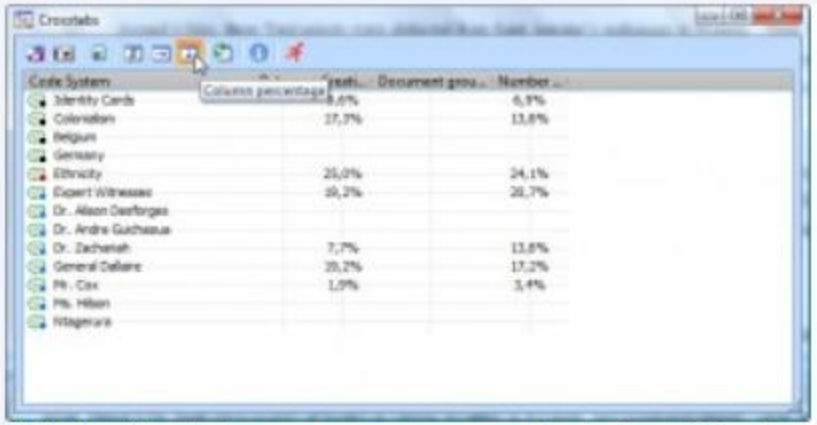
The memo window. Memos can be assigned to documents, text segments, codes, codings, or as free memos, which apply to the whole project.

Visual Tools

The Code Relations Browser displays the codes that overlap in a selected document. You can choose to display these overlaps as a number or as colored squares.



Screenshot Code Matrix Browser



With the Crosstabs, you can compare codes and variables in order to show quantitative connections in a structured way.

With the visual tool Document Comparison Chart, you can see a visualization of the sequential distribution of codes in a selected documents to compare and contrast

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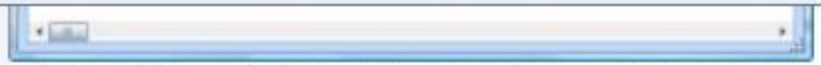
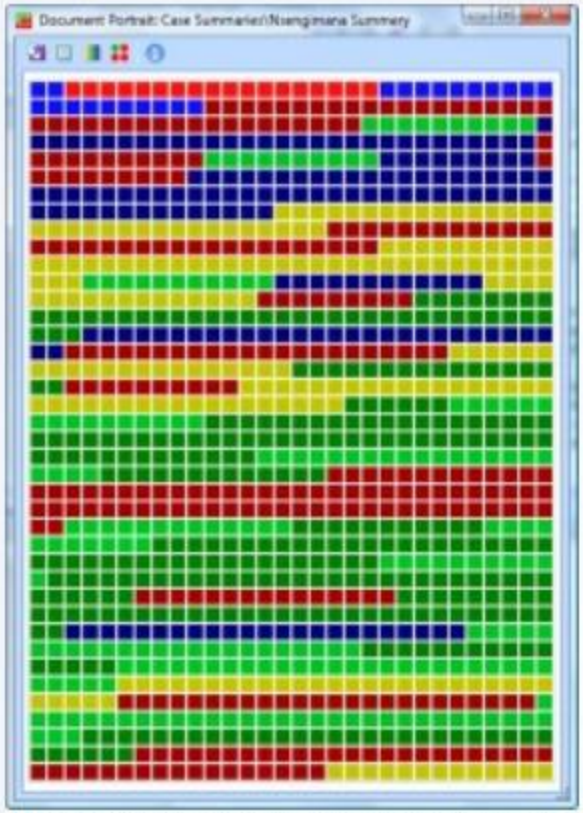
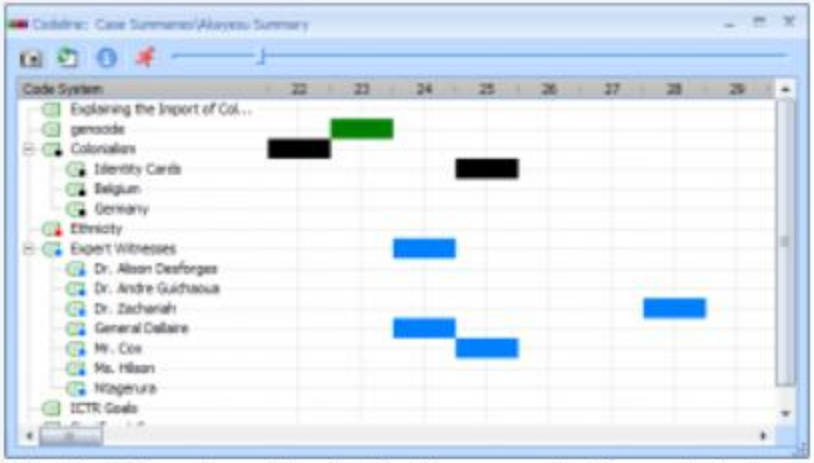


With the visual tool Document Comparison Chart, you can see a visualization of the sequential distribution of codes in a selected documents to compare and contrast.



The Document Portrait visualizes a document via a collection of its colored codings.

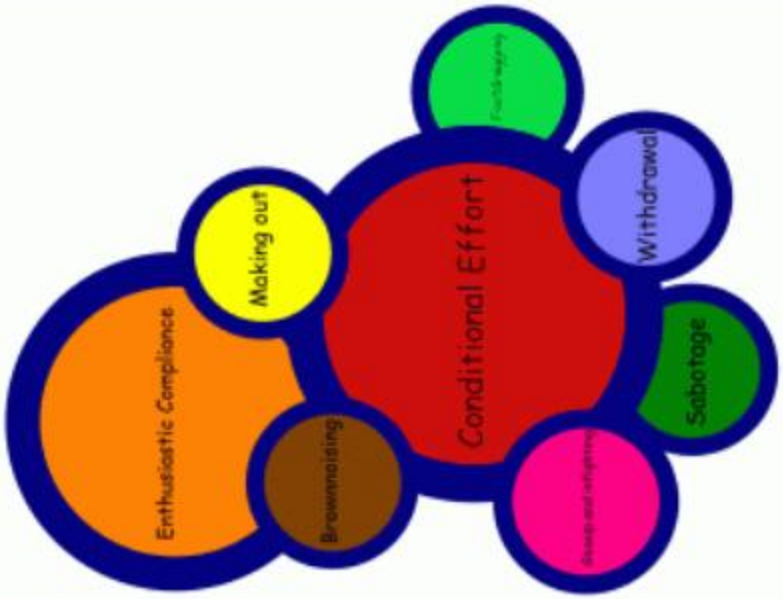


The Codeline shows the distribution on codes in a selected document.

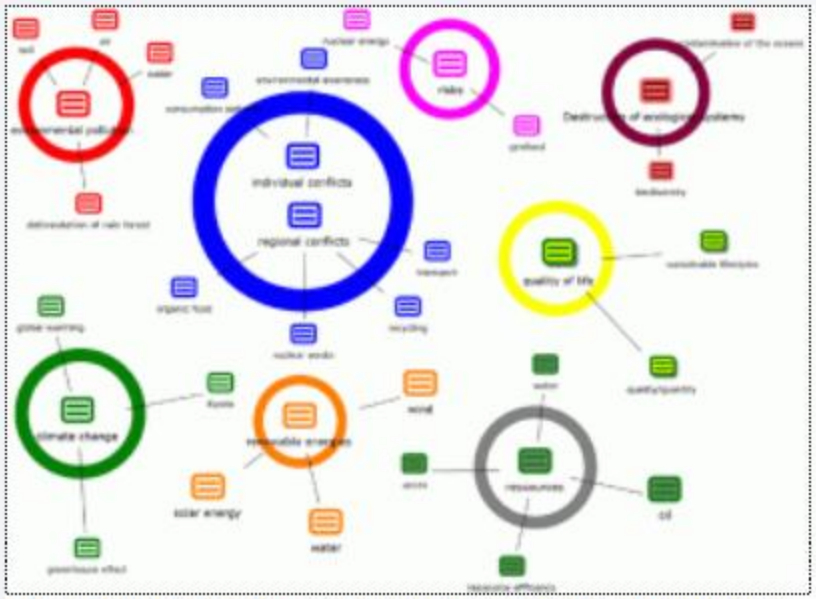
With MAXMaps it is possible to display:

a. The relationships between different codes and categories
b. An overview of facts and phenomena in the research field
c. The different memos belonging to a document or a group of documents
d. The context or important facts of a study, e.g. photographs of locations or persons
e. A graphic overview of the research methods used
f. A time table of the research project
g. The research design and characteristics of the sample
h. much more

MAXMaps examples of use



Title: Overlapping Clusters: Behavioral Modes at the Workplace (Hodson, 1991) Here the codes are represented by overlapping circles. The project has to do with the empirical observation of the forms of reaction of actors in a school innovation project.



This shows the results of a systematic analysis of newspaper articles. All conflicts are defined as codes in MAXQDA (e.g. climate, ecosystem destruction, etc.). The corresponding subcodes were automatically imported into the map with the appropriate colors defined in MAXQDA.

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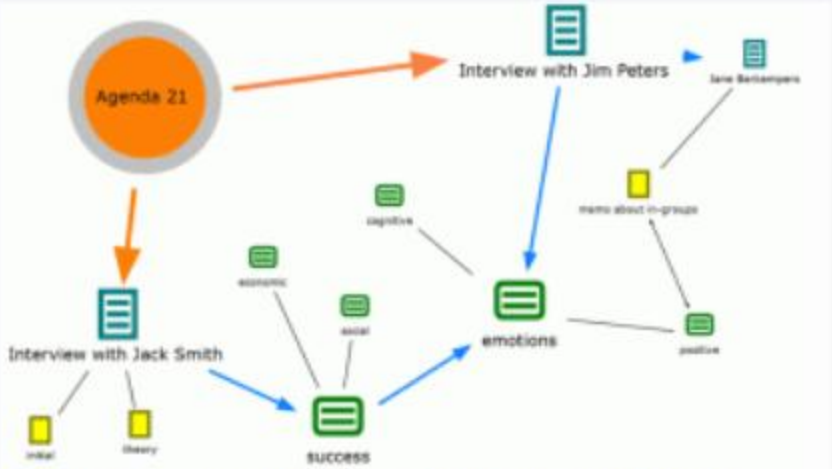

This MAXMaps model displays various elements from the research project "Environmental Communication and Local Agenda 21". Connections and relationships between the texts (in this case, actor and expert interviews), codes, and memos are visualized.

This map shows the result of a brainstorming session concerning personal issues of the person of interest.

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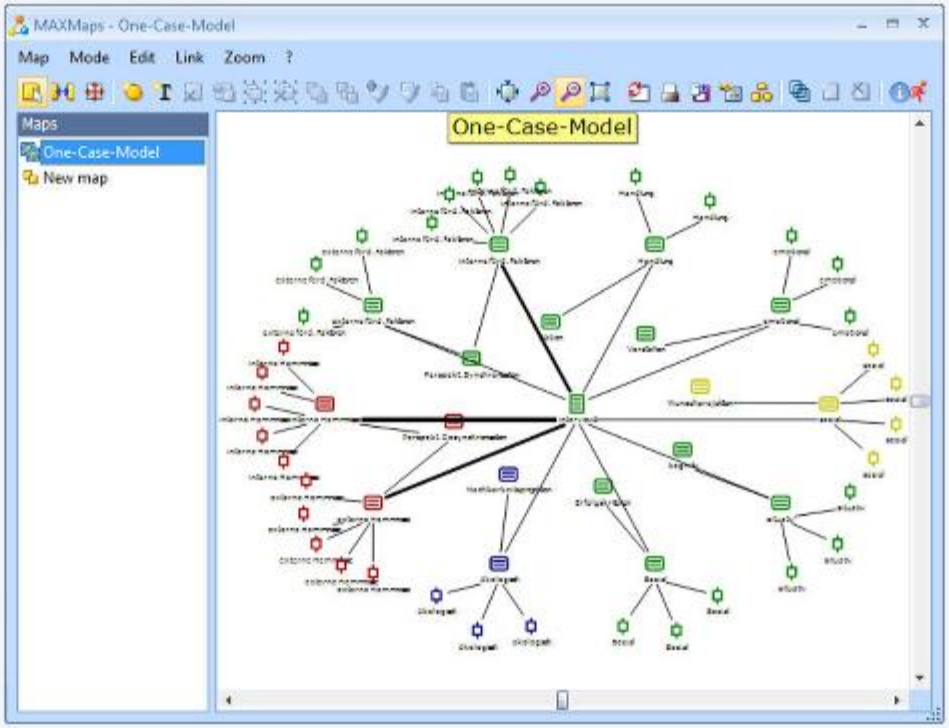

oses. Maps can help to explore and organize data. They enable the development
a research team. Maps can also be a valuable tool for scientific explanation and
ps and theories. For instance, tables and worksheets can be created to gain a
nents of a project. Furthermore, it can be used for presentations and lectures. The
ed in arbitrary order, making a variety of different options for designing

موفق و موید باشید