

Dedoose and Chapter 4 & 5 – Data Preparation & Getting Started

Chapter 4 discusses good transcription practices and discusses the auto-processing which is possible when importing survey data into particular software programs. In Chapter 5 to help get you started, we talk about productive things you can do in the early stages of setting up a 'project' in software. Experimenting with these processes where relevant in your chosen software will help to become familiar with useful entities in the software; experiments to import data will help to confirm you have prepared data in the right way. *See all coloured illustrations (from the book) of software tasks and functions, numbered in chapter order.*

Sections include:

Creating the software project

Transparency

Getting organized

Importing data

Cross referencing

Literature management

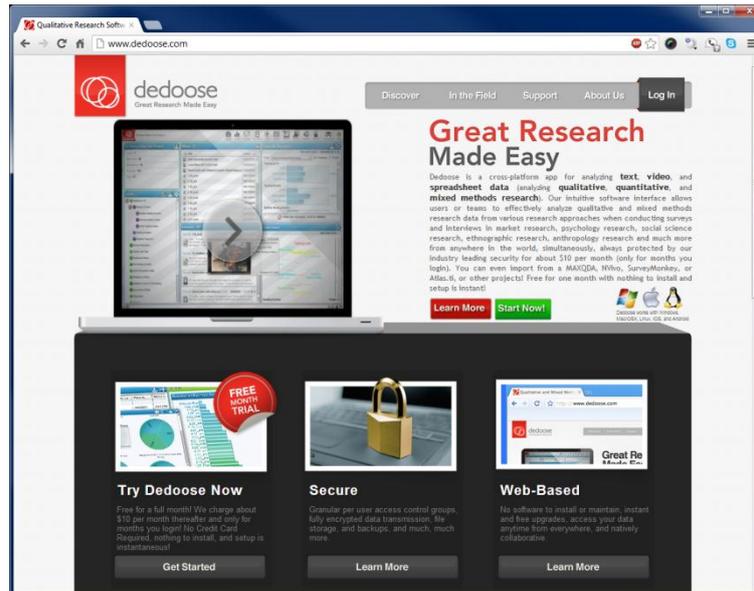
A framework of memos

Getting Started with Dedoose – overview & building

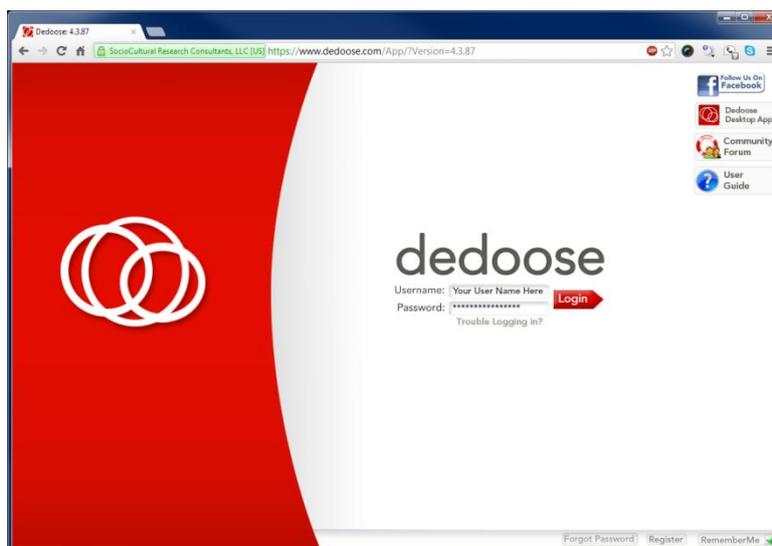
Dedoose is a web application or Software as a Service (SaaS). This means that rather than purchasing a license for software that you install and maintain on your personal computer, you create an account as a Dedoose user and pay a subscription fee for access to the service for particular periods of time. This is the future of software as more and more we access free or for fee services that are delivered via the Internet. Watching movies, listening to music, reading news, finding instructions for how to use your microwave, banking, education, communicating with friends and loved ones via social media, and now, with Dedoose, managing, sharing, analyzing, and presenting qualitative and mixed method research data. Any Internet connected computer (PC, Mac, Linux...) with the free Adobe Flash Player is all you need to access Dedoose.

Setting up a Dedoose user account can be done quickly via the Dedoose informational website. Click 'Get Started,' enter the required information (no billing information is needed), agree to the Terms of Service, and submit.

This document is designed to complement your reading of [Silver & Lewins 2014: Using Software in Qualitative Research: A Step-by-Step Guide, Sage Publications, London](#) rather than as a stand-alone resource. Thanks to Eli Lieber for contributing. Christina Silver & Ann Lewins © SAGE Publications.



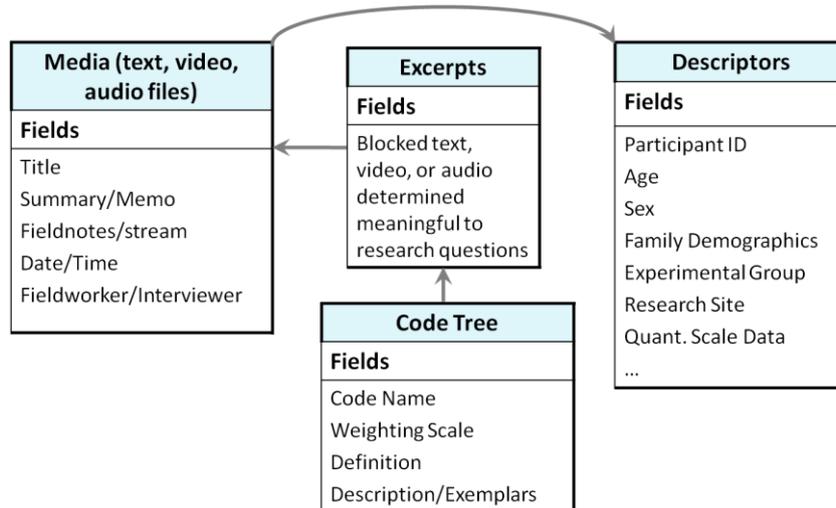
Your account will be set up immediately and when you log into Dedoose, you will find two projects connected to your account – an empty project with the title you had provided when setting up your account and a copy of our demo project so you can explore Dedoose features while building your own database.



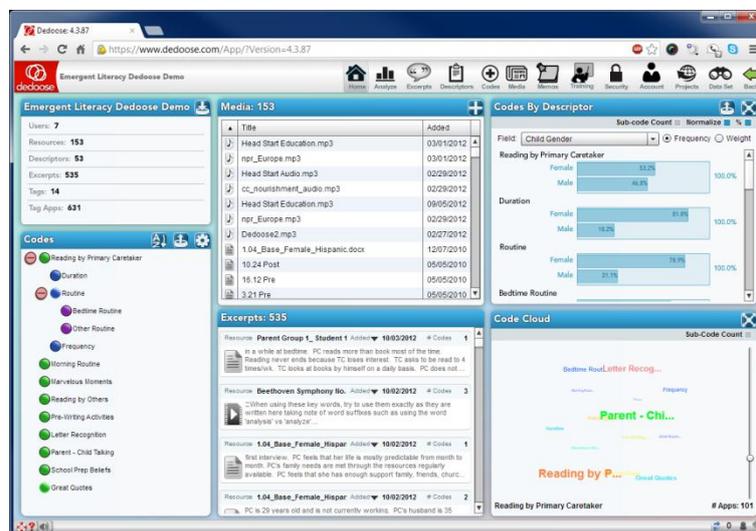
Dedoose Orientation

To get started, it is helpful to understand the basic organization of data in Dedoose. Most aspects should be familiar to qualitative or mixed method researchers, but the nature and use of descriptors is unique in Dedoose. The following schematic shows the fundamental database relationships in Dedoose. Media are stored as text, video, or audio, descriptors are stored in a spreadsheet format and related to media, excerpts are identified within media, and codes and codes weights are associated with excerpts. All of these objects are available for searching, sorting, and analyzing in Dedoose.

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When you log into Dedoose you will be presented with the dashboard of the project you most recently accessed.



Dedoose is organized into a number of workspaces which you can access via the main Dedoose menu bar. While you can carry out particular tasks in a number of places in Dedoose – including the home dashboard, here are the basics:



- 'Home' – project dashboard
- 'Analyze' – for access to all interactive charts, graphs, and tables
- 'Excerpts' – view, sort, filter, and export excerpted qualitative data
- 'Descriptors' – view, create, upload, sort, filter, and export descriptor data
- 'Codes' – view and create codes and modify the code tree structure

- 'Media' – view, upload, sort, and filter qualitative data sources
- 'Memos' – create and organize memos that are free floating or linked to any number of objects in the database
- 'Training Center' – create, take, and view the Cohen's Kappa and Pearson's correlation results of tests designed to help research teams build and maintain inter-rater reliability
- 'Security Center' – where you can create security groups with different access privileges in your project and assign different users linked to your project to the group appropriate for their role and responsibilities
- 'Account' – essentially the billing center where you can view, add, or remove other Dedoose users for whom you are paying, view the status of your account, submit payments, get receipts, and change your user account password
- 'Projects' – view the different projects to which your user account is linked, move from project to project by double clicking on a project title, create new projects, rename or delete projects. Note that, by default, when you log into Dedoose the most recent project you had been working on will load
- 'Data Sets' – create, save, and activate global filters based on any number of Boolean operators

Setting up a New Dedoose Project

From the 'Projects' click the 'Create Project' button, provide a title, and the new project will be immediately ready for use.

There are three basic building blocks to a Dedoose project before you begin creating excerpts and then analyzing your data:

1. Qualitative data – video, audio, text, and other media
2. Descriptor data – demographic, scale score, and other survey types of data which are important in characterizing and distinguishing the sources of your qualitative data from a more quantitative perspective
3. Code System – the conceptual framework you will use to understand, organize, and communicate the meaning within the qualitative data and how they speak to your research questions

Establishing these building blocks can be done in a variety of ways. Create each within Dedoose manually or upload one or more of these database aspects from .csv, .xls, .xlsx, .txt, .rtf, .doc, .docx, .mp3, and/or .mp4.

Uploading Qualitative Data

Clicking the '+' sign in the upper right corner of the 'Media' panel on the Dedoose dashboard or in the 'Media' workspace will activate a pop-up with options to upload video, audio, or text files or create a new document within Dedoose. Select the type of media to upload, select any number of files to upload, submit, and they are brought into the project. Two things to note: a) video and audio files must be processed within Dedoose before they can be viewed and excerpted and warnings will inform when they have uploaded and are ready and b) the time required for upload will depend on the size/type of file and the quality of Internet connectivity.

Creating or Uploading Descriptor Data

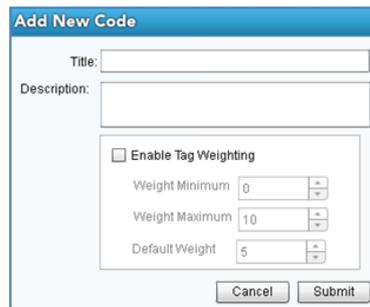
A set of descriptor data includes two facets. First are the definitions of the fields (variables). Fields can be one of four types: text, number, date, or option list (categorical). Each field definition includes a title, description, type – if option list, a set of two or more values (ex. values for eye color could include brown, blue, and green) – and, if appropriate, a setting to designate the field as dynamic which allows for the analysis of change over time in longitudinal research. The other facet

of a descriptor set are the data themselves. Descriptor data are what drive many of the interactive Dedoose analytic charts, tables, and graphs and can also be used in sorting and filtering the work you've done with the qualitative data.

Descriptor field definitions and data can be imported directly into Dedoose from a .csv or Excel file. Yet, from a more manual approach you can upload your qualitative data, create and enter your descriptor data, create and structure your code system.

Creating and Working with Code Systems

To add or modify a Dedoose code system, click the 'Edit' codes icon in the 'Codes' panel ,



To add a new root code, click the '+' sign in the panel header and enter the desired information: a title, description (which will appear as a smart tip in Dedoose when floating over the code with your cursor), and, if appropriate, you can enable and enter the settings for a code weight system. Making use of code weighting can be a powerful part of a qualitative or mixed methods database. The system can be anything one can represent by a dimension. For example, in the Dedoose demo project that is created when a Dedoose account is established, rating scales of 0-5 were used to represent the relative quality of reading by parents to young children and other aspects of a home literacy environment, 0-7 to indicate the number of days per week the parent read, and 0-90 to indicate the number of minutes in a reading episode. Other uses of weight systems include 'importance,' 'quality,' or 'centrality.' Weights/ratings are set whenever you apply particular codes and can be activated at any time. Often one must become familiar with the qualitative data before a clear dimension emerges and weight/rating systems can be applied whenever the time is right.

To change the hierarchical structure of a code tree when in editing mode, codes can be dragged and dropped onto other codes to create children or dropped into the space at the bottom of the tree to convert a child code to a parent.

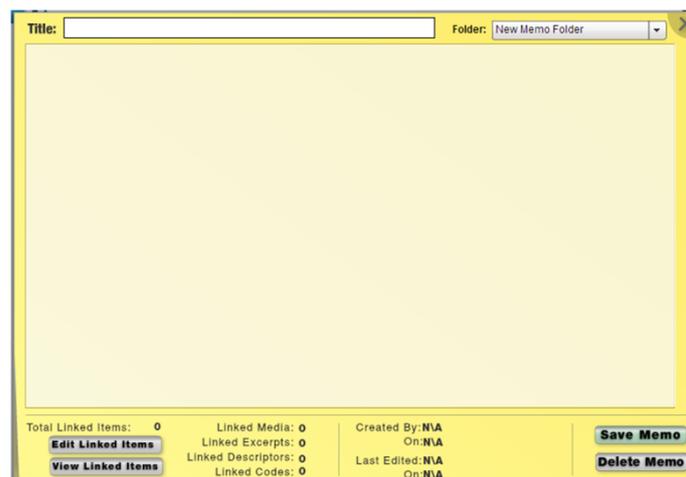
Codes can also be merged or deleted. To edit an existing code you must first be in code tree editing mode. Then when floating your cursor over a code three icons appear: memos, edit code, and add child code (another way to make use of a code hierarchy). Click the edit code icon and you can change the title or description, activate/deactivate code weighting, delete or merge the code.



Creating and Working with Memos

Dedoose memos are organized in a folder system. Click the 'Memos' icon in the main menu bar to enter the memo workspace. Create a first folder by clicking the 'Edit' icon in the folders panel click the '+' sign to add a new folder, enter a title, and submit.

To add new memos, click the '+' sign in the larger 'Memos' panel, enter all desired information, designate the folder of choice, and save.



You can also view and edit the items linked to the memo whenever a memo is open and active, though it is more common to create and link memos when dealing directly with particular documents, excerpts, or codes and there are 'memo' buttons and icons throughout Dedoose for just this purpose – you'll find them when editing excerpts or codes, viewing descriptors or documents, and they can also be linked to locations in documents, videos, or audios, by right-clicking at the specific location and choosing to 'Create/Link Memo.'

Excerpting and Coding

Excerpts are created in Dedoose by blocking text and then either clicking the 'create excerpt' button in the lower left corner of the document viewer or right clicking on the blocked text and selecting the 'create excerpt from selection' in the short cut menu. You will see that the excerpted text becomes colored, a bracket will appear in the left margin marking the boundaries of the excerpt, and the header in the 'Selection Info' panel will turn orange – your indication you are in excerpt editing mode. You can then apply codes by dragging and dropping them into the selection info panel or by double clicking the codes of choice. If activated, you can also set code weight/rating values. While in excerpt editing mode, codes can be

deleted by clicking the 'x' next to any code that was applied and the entire excerpt can be deleted by clicking the 'x' next to the excerpt icon. Clicking anywhere else in the document will cause you to exit editing mode and you can re-enter editing mode by clicking on the bracket that marks the excerpt boundary.

Excerpting audio or video is a similar process. Clicking anywhere on the stream timeline will cause the play head to jump to that location and there are two excerpt brackets that always surround the play head. Pause the video or audio, set the start and end points by dragging the excerpt boundary brackets, and click the 'create excerpt' button. You'll see a bracket appear in the timeline and, when orange, codes are added and removed in the same way as when excerpting text.

Preparing and importing data

Preparing and Importing e.g. Word files (as in Case study B) the focus group data.

There are no special changes or requirements of textual data. The other documents to be uploaded to the project need no special preparation. The process starts by clicking the '+' sign in the Media panel, selecting 'Import Text,' locating the files on the client computer, and then submitting

Preparing and Importing 'Survey' Data to Dedoose

In situations where project data are all stored or prepared in a spreadsheet, ex. exported from SurveyMonkey, Qualtrics, or other online data collection service, they can be imported directly into Dedoose if the Excel file is properly formatted.

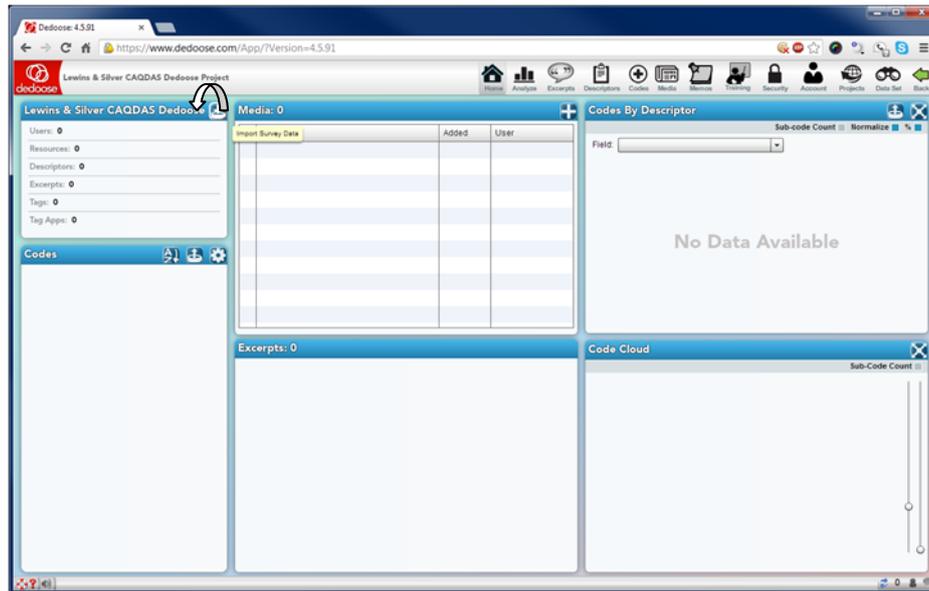
What is required, and recommended to maximize analytic features, the following guidelines should be followed prior to the import.

1. Replace missing data points for any categorical variables so all respondents will be included in Dedoose charts and tables
2. Use brief and informative column headers
3. Numerical proxies for values should be changed to their proper label...as in the sample data 'Q.1. JOB-SECURE' column. Ex. 0 = 'Very Poor,' 1 = 'Poor'... 4 = 'Very Good'
4. Where respondents can select more than one value to a survey question, create columns for each value and then use values like 'true/false' or 'yes/no' as the data points and then unpack the data for each participant...as in the sample data 'Fault' column
5. For any narrative/open-ended responses, you add a '_ddqual_' prior to the code in the column header. Ex. 'How Affected?' becomes '_ddqual_How Affected?'

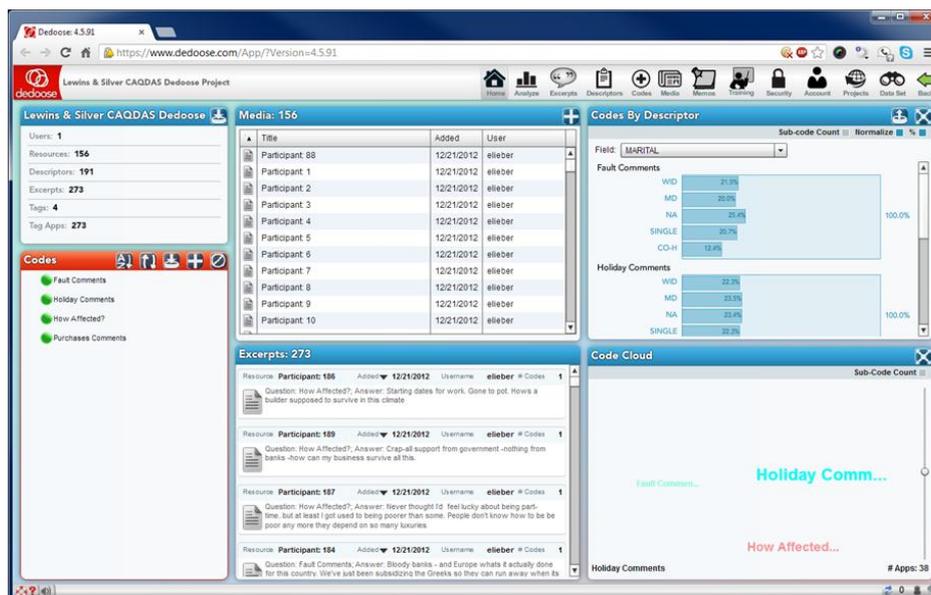
And, with that, the file is ready for import via the Dedoose survey import wizard. All demographic and scale data will be converted to descriptors, the fields will take the name of the column headers and the valid values will all be defined, and each case will be populated. For the qualitative data, each column with qualitative data is extracted and a document created for each participant with all their text responses and properly linked to the descriptor data. The column headers for these data become codes in Dedoose and each response is excerpted and tagged with the appropriate code.

A new empty project:

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And seconds later after clicking the survey import icon and selecting the file...



The other documents to be uploaded to the project need no special preparation. The process starts by clicking the '+' sign in the Media panel, selecting 'Import Text,' locating the files on the client computer, and then submitting.

The next exercises which are connected with topics in Chapter 6 – concentrating on work that can be done at data level.

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Dedoose and Chapter 6 – Working at Data Level

Chapter 6 in the book is all about working at data-level. Being immersed in the data for most researchers is part of familiarising with and analysing the data. You may need this before coding or to enrich and substantiate the coding process (chaps 7-9). Remaining close to the data will be more important for some researchers, but for all, the functions covered here may be key analytic processes in many different approaches to qualitative research. *See all coloured illustrations (from the book) of software tasks and functions, numbered in chapter order.*

Sections included in the chapter:

Annotating

Marking data

Data reduction

Text searching

Word frequencies

Text mining

Hyperlinking

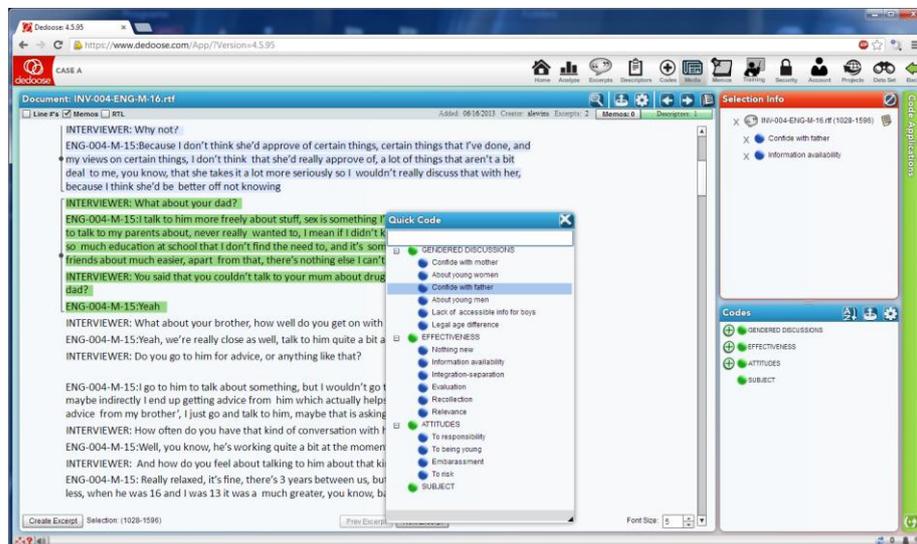
Excerpting (& Coding)

Excerpting in Dedoose is accomplished via the media viewer.

1. Open a document, video, or audio file – this first illustration is with text
2. Locate and block important content in the document which informs your research question
3. Create an excerpt from this content by:
 - a. Clicking the 'Create Excerpt' button in the lower left corner of the panel
 - b. Right clicking on your mouse to activate a short cut menu and select 'Create Excerpt from Selection' or
 - c. Clicking your keyboard space bar to activate the Quick Code Widget and the excerpt will be created after you've selected the first code and further code selection and application is all keyboard controlled
4. When in excerpt editing mode (where the 'Selection Info' panel header is colored orange) you can apply codes to the excerpt by:
 - a. Double clicking on a code in the 'Codes' panel
 - b. Dragging and dropping codes from the panel into the Selection Info panel
 - c. Clicking the 'Enter' key on your keyboard when using the Quick Code Widget
5. Remember that coding may be about just **marking** or **annotating** the data for certain purposes – possibly just to indicate relevance. Along the same lines it may be about **data reduction** along a few broad themes so that you can

begin to focus on the data which are significant for various reasons. [See Chapter 7 for a fuller account of the role of coding in different approaches to analysis.](#)

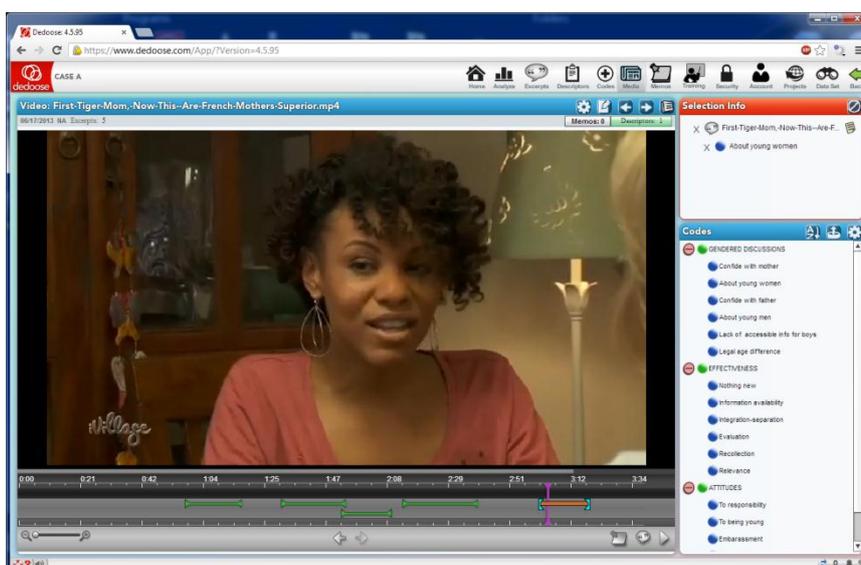
6. Coding can continue until you exit editing mode by clicking anywhere in the document outside the newly created excerpt



And for good measure, here's what excerpting and coding looks like for video:

You can click anywhere on the timeline to advance the play head. Create excerpts by

1. Sliding the blue boundary markers to mark the region
2. Optional, but I like to pause the video
3. Click the 'Excerpt' icon next to the play button
4. Apply codes as with text – but no quick code widget here yet



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And if you have, or want to create, transcriptions of the audio stream you use this view where you can transcribe or import transcriptions and then synch sections to the excerpts that have been created. Then when you 'hit' the excerpt in a search or other analysis, you get both the clip and the transcribed audio stream.

The screenshot displays the Dedoose software interface for a project named 'CASE A'. The interface is divided into several panels:

- Media:** A table listing media items with columns for Title, Added, User, and # Ex. The table contains 9 items, all added on 06/16/2013 by user 'alewins'.
- Codes By Descriptor:** A bar chart showing sub-code counts for 'ATTITUDES' and 'Embarrassment'. The 'ATTITUDES' chart shows counts for 1.2, 3.4, 5.6, and 7.8. The 'Embarrassment' chart shows counts for 1.2, 3.4, 5.6, 7.8, and 1.2.
- Codes:** A list of codes on the left side, categorized into 'ATTITUDES', 'EFFECTIVENESS', and 'GENDERED DISCUSSIONS'. The 'ATTITUDES' category includes 'Embarrassment', 'To being young', 'To responsibility', and 'To risk'. The 'EFFECTIVENESS' category includes 'Evaluation', 'Information availability', 'Integration-separation', 'Nothing new', 'Recollection', and 'Relevance'. The 'GENDERED DISCUSSIONS' category includes 'About young men', 'About young women', 'Confide with father', 'Confide with mother', and 'Lack of accessible info for boys'.
- Excerpts: 90:** A central window displaying a video player and a list of excerpts. The video player shows a woman speaking. The list of excerpts includes:
 - Resource: First-Tiger-Mom-Now-This-A. Added: 06/18/2013. Username: NA. # Codes: 2. Excerpt: INTERVIEWER: So have you ever had any sex of relationships education at school?
 - Resource: First-Tiger-Mom-Now-This-A. Added: 06/18/2013. Username: NA. # Codes: 2. Excerpt: ENG-001-F-15: Education, no, no I didn't just biology, that's it...
 - Resource: First-Tiger-Mom-Now-This-A. Added: 06/17/2013. Username: NA. # Codes: 2. Excerpt: ENG-001-F-15: Well when I was 7 or 8 years old, I used to have a really good friend, and when she was finding out about sex or cigarettes or about drinking alcohol, something and she was telling her parents, and her parents asked her who told her and she was always ill.
 - Resource: First-Tiger-Mom-Now-This-A. Added: 06/17/2013. Username: NA. # Codes: 3. Excerpt: ENG-001-F-15: Well actually I don't, I wanted to go down to the park with my friends, but I w...

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Dedoose and Chapters 7,8 & 9 – Coding

Chapter 7,8, 9 discuss coding, coded retrieval and coding schemes as key tools of qualitative analysis. We discuss the terminology and philosophies which underpin coding processes. Specific methodologies use particular routines when coding. More general thematic analyses or less code-based methods may use coding devices in ways which include data reduction strategies, indexing and marking data. The structures of coding schemes, alternate groupings and basic retrieval mechanisms are key to moving forward with analysis. *See all coloured illustrations (from the book) of software tasks and functions, numbered in chapter order.*

Sections included in the chapters:

Inductive, deductive and abductive approaches

Theoretical coding

Grounded Theory

Visual data, coding directly or via a transcript

Retrieval

Filtering devices

Horizontal or Vertical cuts

Moving on

Quantitative overviews

Hierarchical and non-hierarchical coding schemes

How to escape the structures of your coding scheme

Sets and alternative grouping mechanisms

Basic Coded retrieval in Dedoose

While there are many ways to retrieve coded data in Dedoose, the most straightforward is via the code tree. For excerpts coded with a particular code:

1. Floating your cursor over the code of interest and Click the 'excerpts' icon that will appear



2. From the resulting list, you can open an excerpt for fuller viewing, code addition/removal, and adjustment of any code weighting/rating that may have been applied

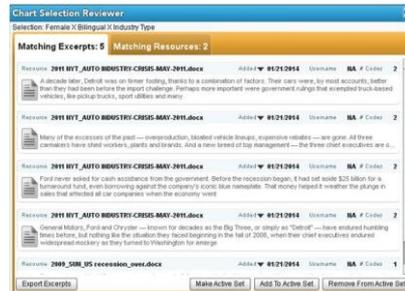


Further, from the excerpt list you can quickly export the excerpts to your local computer in Word or Excel format for use in manuscript and presentation preparation.

Second, it is important to be aware that all Dedoose data visualizations allow for direct access to the underlying excerpted and coded underlying qualitative data. To pull up the excerpted represented in a visual, clicking any aspect of a chart, table, or plot will result in a list of the associated excerpts and from there you can review or download.

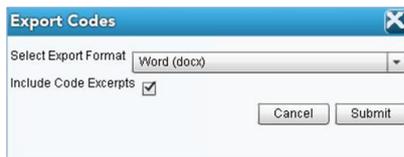
Ex. Clicking the highlighted bar in the image below results in the list of underlying excerpts to be presented:

1. Click bar
2. Review Excerpts



The code tree is also a great way to export all excerpt organized by code. To do so,

1. Click the 'Export' icon in the code tree panel header
2. Select 'Word' as the export format
3. Assure the 'include excerpts' check box is checked



4. Submit and you'll have a Word file with all project excerpts organized on a code by code basis.

The Excerpts Workspace is a solid alternative to the code tree or chart strategies for accessing excerpts. You can make use of filtering to narrow the set of excerpts to those that meet particular criteria and then review or export the results. For example, the following snapshot shows the results of the following actions within the Excerpts Workspace:

1. In the 'Columns' panel click 'clear all' to simply the data in view
 - a. Click 'Document' and 'Codes Short' to view just this information for each excerpt
 - b. Open the 'Codes' folder
 - c. Click codes '...' and '....' And you'll see folders for each appear in the 'Filtering' panel
2. In the 'Filtering' panel

- a. Open the folders for the codes selected
- b. Click 'True' for each code and, since the code '...' also shows code weights, click 3, 4, and 5.

These actions narrow the list of excerpt shown to only those for which code A and/or code B with weight 3, 4, or 5 was applied. This subset can be explored or exported by selecting all and then clicking 'export' selected.

Dedoose and Chapter 10 – Managing Interpretations

Chapter 10 in the book is all about managing interpretations; managing where and how you make analytic notes, using software structures to ensure your thoughts do not get forgotten or your notes lost. Ways of expressing or visualizing connections and relationships are sometimes provided in software and help in the generation and management of the ideas that you have about the data. The literature that informs your work is very important and these software programs can be used in many different ways to manage cross referencing with substantive data or to manage the literature review itself. *See all coloured illustrations (from the book) of software tasks and functions, numbered in chapter order.*

Sections included in the chapter:

Writing as continuous analysis

Critical Appraisals of literature

Analytic memos

Process memos

Definitions

Linking notes to data

Integrating notes with other work

Visualising memos

In Dedoose part of the management of work and interpretations might have a lot to do with the collaborative possibilities of web-mounted project work since team-members can log on from different sites and work together –this aspect, along with related security issues follows on from the sections on memoing.

Memos

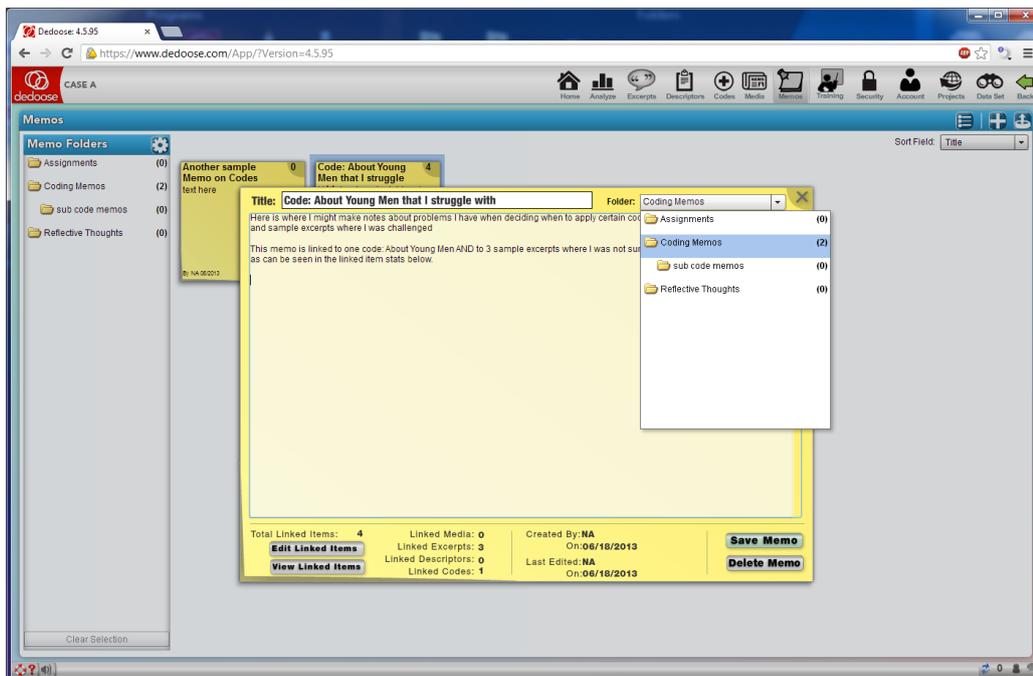
Overview – From a broad design standpoint, the memo system was designed to be as flexible as possible...and actually designed around many suggestions from Silvana di Gregorio, who you may know. Memos can be free floating, as may be wanted by grounded theorists to track their analytical thinking or by instructors to leave assignments to students. They can also be linked to any object or any number of objects. I do lots of coding memos with my teams early in projects where we write memos around any challenges we have when developing coding criteria and then link the memo to the particular code AND to some of the challenging excerpts. Later we can export these along with the associated excerpts and work through the challenges. Others may link memos to descriptors (cases), entire documents, or locations in documents.

Memos Workspace – Memos are organized in a folder structure that you create based on your needs. The structure can be flat or hierarchical. The presentation can be post-it note like or a simple list as can be toggled with the bullet-point like icon in the upper right corner of the workspace. And they can also be sorted by a number of parameters

Working with Memos – Memos can be created within the Memo Workspace, while editing the code tree, while creating or editing an excerpt, when viewing a document, or by clicking on a location in a document to create an 'in line' memo. You just have to click on the 'memo' icon that will appear when in these modes, by clicking the 'memo' button when viewing a

document, or by right-clicking on your mouse when looking to create an in-line memo and then selecting the create/link memo at cursor option.

Editing Memos and Memo Folders – these tasks can be done from the Memo Workspace or when viewing a memo in another context. You can edit the memo content, change the folder in which the memo is stored, and revise the objects the memo is linked to by using the available controls. Similarly, the Memo Folders can be edited at any time in the workspace.

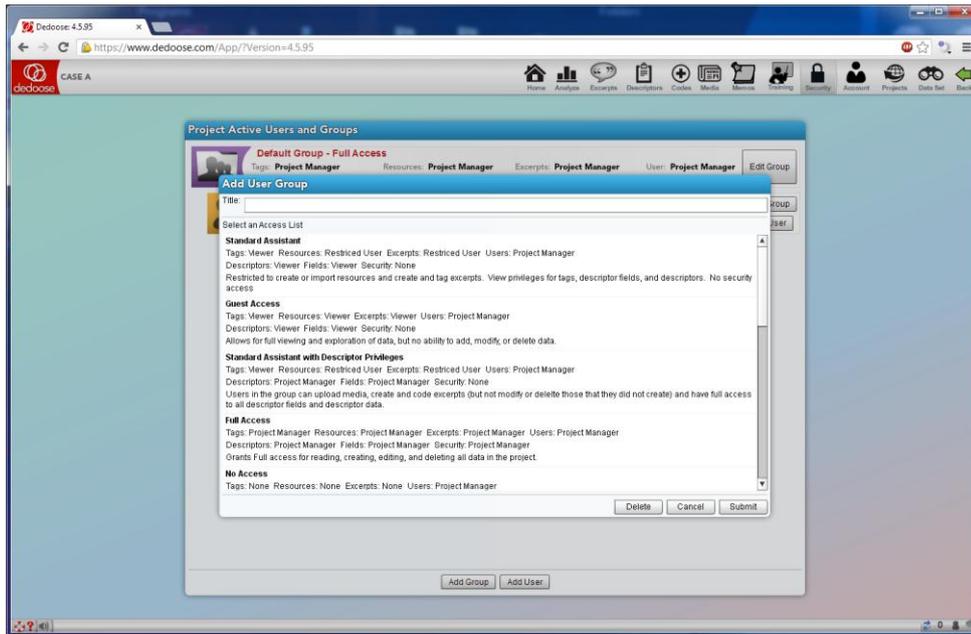


Collaboration/Teamwork

As a web based software application, Dedoose is natively collaborative. Any number of users can be connected to a project and be working together simultaneously, in real time, from any Internet connected device. Yes, there is a Dedoose Android app and Dedoose runs beautifully on an iPad through an app called Photon.

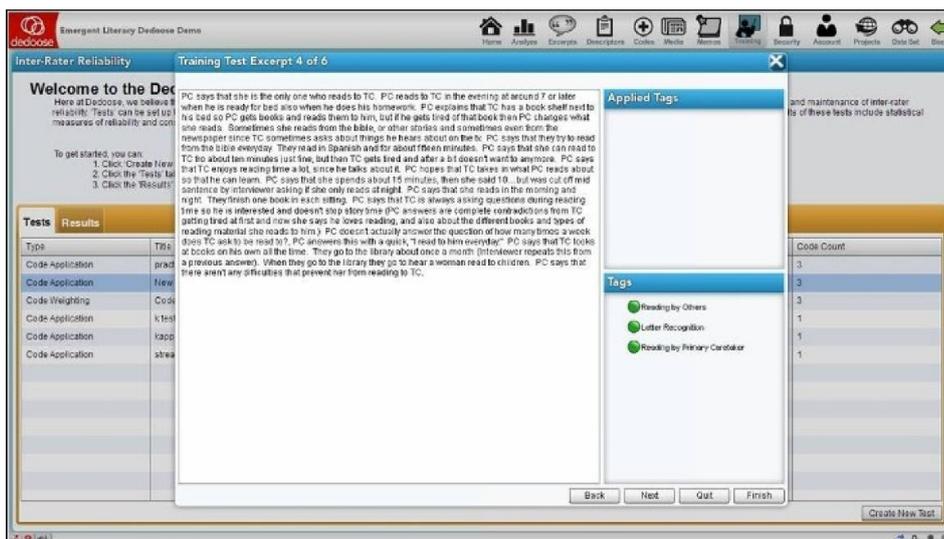
The project Security Center is where project administrators can control what privileges each user can have. Every object has four settings: view, create, modify, and delete and each of these parameters can be set to allow very specific controls over what team members can see and do to the database. In Dedoose we have pre-programmed a set of security profiles – each with varying access privileges – that project administrators, or any other user with access to the Security Center, can choose to use in the project.

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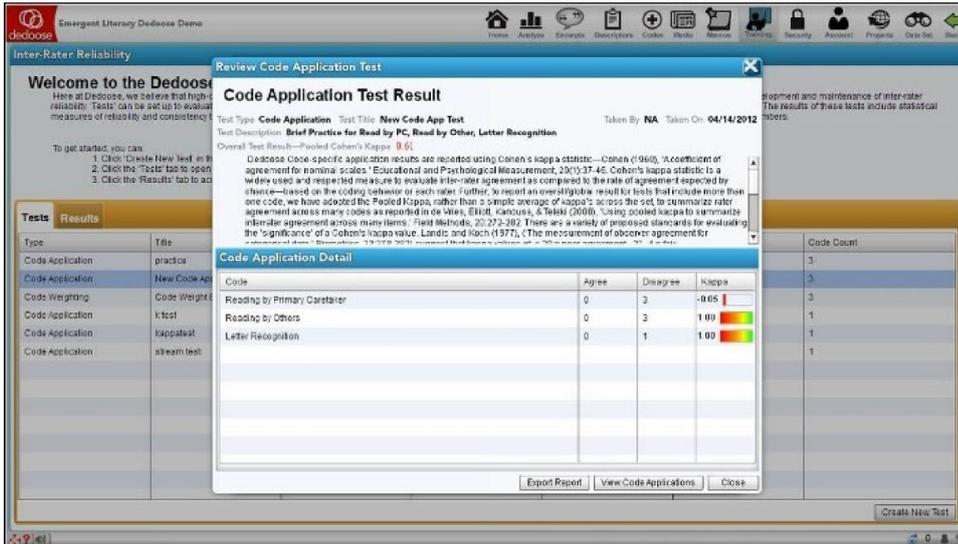
Since the launch of Dedoose, only two additional security groups have been set up upon request by users who needed something we'd not yet implemented. Should other unique needs arise, it is a simple matter for the Dedoose development team to create and deploy new profiles.

The Dedoose Training Center was designed to help teams build and maintain inter-rater reliability. Tests are created based on previously excerpted and coded text. Others on a team enter the system and take the test where they are presented with the excerpt text (in the case of a code application test) and must select the codes they feel are appropriate for the excerpt blind to the codes previously applied. After the test, they are presented with Cohen's Kappa coefficient for each code included in the test, a pooled Kappa as an overall measure of performance, and a number of other diagnostics that are useful in working through discrepancies. Code weighting/rating tests include the excerpt text and the codes applied and the test taker must set the appropriate weight/rating. In these tests, results include Pearson's correlation coefficient and other metrics based on the range of values on a particular scale. Here are few sample snapshots:

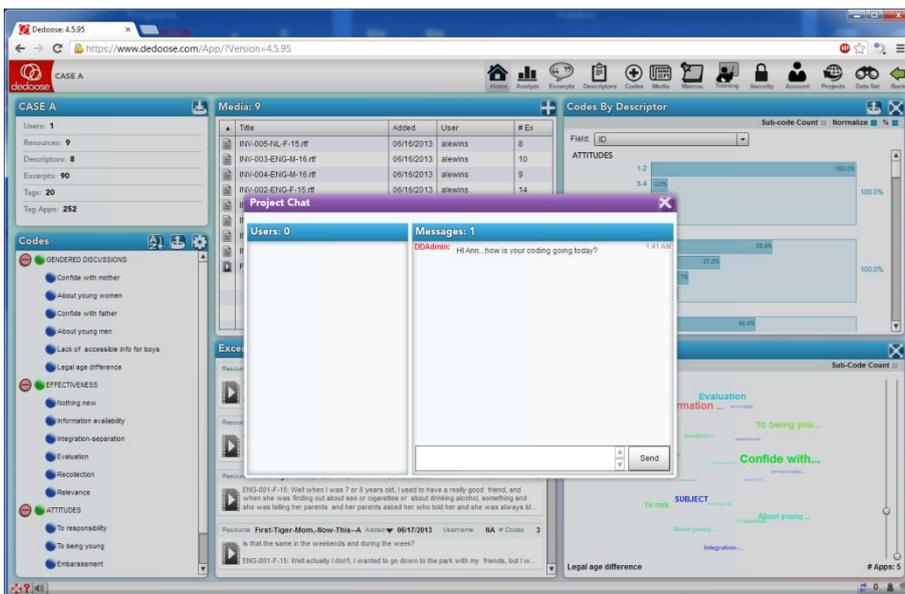


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Built into Dedoose (and located in the project footer in the lower right corner) is a traditional chat system that users can take advantage of to communicate with others on the team who may also be actively accessing the database.



Further, all objects created in Dedoose are stamped with username of the team member who created it. This information can be useful in searching and filtering alongside other types of data in the system.

Finally, while projects can always be copied and merged if needed, the vast majority of research teams simply log into the same project and off they go. The moment a user submits a newly created object it is 'owned' by the project database and available to all authorized project users.

Further organization of data is key to all the routine support provided in Dedoose which emphasizes the application's mixed methods credentials. See Chapter 12 exercises.

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Chapter 12 discusses the variety of ways organisation of data can happen and the importance of particular organizing tools to enable different levels and complexity of interrogation. Chapter 6 discussed basic structures like folders which enable simple tidying up and filtering. This chapter takes the subject further and focuses on the need to assign multiple variables, descriptors or attributes to each respondent or case, so that comparing within or across cases can happen via combinations of data and subset characteristics if required. *See all coloured illustrations (from the book) of software tasks and functions, numbered in chapter order.*

Sections included in the chapter:

Illustrating the potential for interrogation

Timing, when to put organisational structures in place

Organising whole documents

Organising parts of documents

Auto coding structures in documents

One of the most seamless and powerful aspects of Dedoose is capitalized upon by the linking of qualitative resources (and all the subsequent excerpting and tagging/coding of this content) with everything else known about the source of these data. 'Everything else' we know is referred to as 'descriptor' data in Dedoose. These data can be demographics, survey response, test scores, or any other information that is useful in distinguishing one case in a study from another. When these data are created within or imported to Dedoose and linked to associated qualitative resources, the Dedoose analytic features come alive and allow for a wide range of tabling, charting, mapping, sorting, and filtering based on any of these 'objects' in the database.

In Dedoose, 'Descriptors' are sets of information you use to identify and describe the sources of your documents (e.g., documents, video, audio, images). Commonly, these are the characteristics of your research participants (e.g., individuals, dyads, families), but can also be descriptions of settings – in which observations are made (e.g., stores, schools, neighborhoods, cultures) – about which you are collecting information.

Click the 'Descriptors' icon in the main Dedoose menu bar to define and create descriptor fields and data:

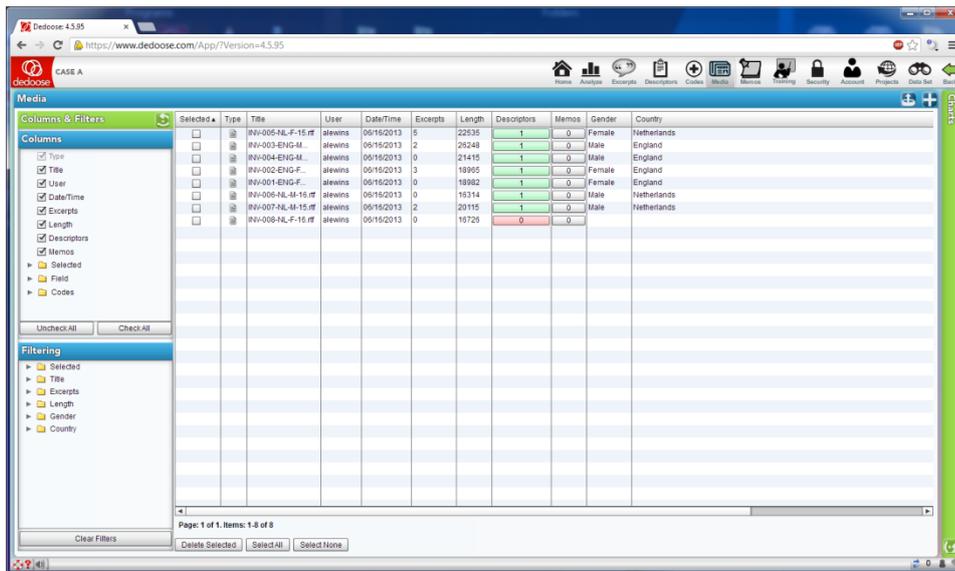


See the in-depth section of this guide for more on manually building and modifying descriptor sets, but since most users will have these data in a spreadsheet form the importing process follows immediately after the next section on (manually) making descriptors

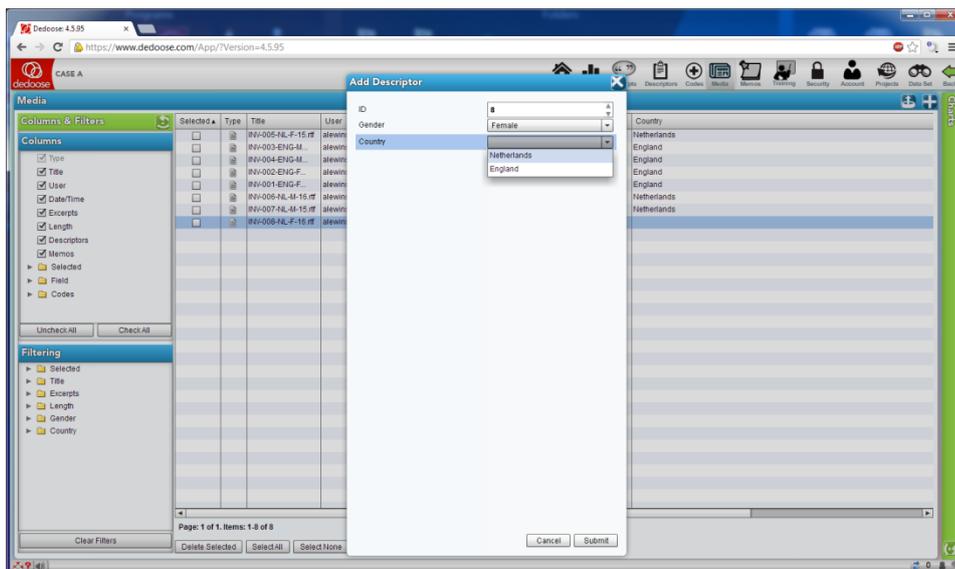
Descriptor Creation and Linking

Creating descriptors and linking them to media in Dedoose can be accomplished in a variety of ways. One simple illustration is to do so from the Media Workspace after defining the desired descriptor fields. In this example, fields for ID, gender, and country have been defined. Then from the Media Workspace it is easy to identify which have been linked to descriptors or not as well as the descriptor data themselves.

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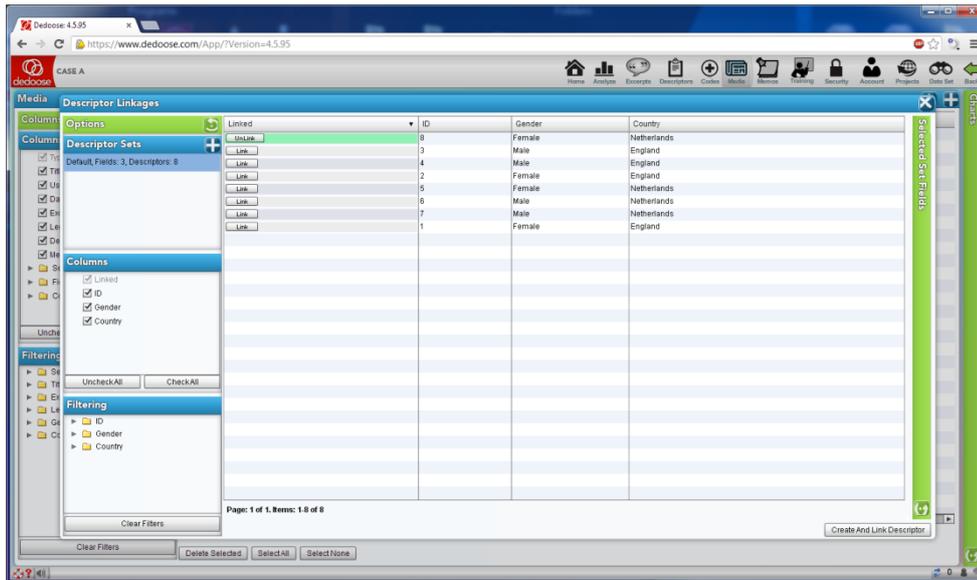


Clicking on the red descriptors button for the INV-008-NL-F-16.rtf file triggers a descriptor linkages popup where, by using the button in the lower right corner, one can 'Create and Link' a new descriptor.



Enter the descriptor data, submit, and you are then presented with a new view showing this newly created descriptor and that the linking was successful.

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Close the popup and, with these demographic and any other descriptor data linked to the media, you are prepared to take advantage of the many Dedoose charts, tables, and plots which draw upon these data and all your excerpting and coding of the qualitative media.

Importing Descriptor Field Definitions and Data

There are two steps to importing descriptor definitions and data from Excel into a Dedoose project:

1. Prepare and import the descriptor field definitions.
2. Prepare and import the descriptor data.

First, field definitions – to import field definitions, the imported data file MUST be structured with the following format:

1. Descriptor Name
2. Memo
3. Descriptor Type (Text, Number, Date/Time, or Option List)
4. Option List Data (if applicable)...the valid values for categorical fields (ex. for gender, 'male' and 'female')

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Example of Format and Column Headers for Importing Descriptor Field

	A	B	C	D	E	F
1	Descriptor Name	Memo	Descriptor Type	ListData		
2	ID	Child ID	Number			
3	Child Sex	Child Sex	List	Male, Female		
4	Ethnicity	Child Ethnicity	List	Hispanic, African American		
5	Reading Language	Primary language when reading to child	List	Spanish, English, Bilingual		
6	Mother primary Language	Mother primary language	List	Spanish, English, Bilingual		
7	General Home Language	Language most used at home	List	Spanish, English, Bilingual		
8	Mother work status		List	Not Working, Part Time, Full Time		
9	Father work status		List	Not Working, Part Time, Full Time		
10	Home size	Number of people living in home	Number			
11	PC reading change	PC Reading Pre-Post Change	List	-4, -3, -2, -1, 0, 1, 2, 3, 4		
12	Other reading change	Others Reading Pre-Post Change	List	-4, -3, -2, -1, 0, 1, 2, 3, 4		
13	Writing activity change	Writing Activity Pre-Post Change	List	-4, -3, -2, -1, 0, 1, 2, 3, 4		
14	Letter knowledge change	Letter Knowledge Pre-Post Change	List	-4, -3, -2, -1, 0, 1, 2, 3, 4		
15	Parent_Teacher communication change	Parent Teacher Communication Pre-Post Change	List	-4, -3, -2, -1, 0, 1, 2, 3, 4		
16	Kinder prep change	Kindergarten Prep Pre-Post Change	List	-4, -3, -2, -1, 0, 1, 2, 3, 4		
17	Resources change	Family Resources Pre-Post Change	List	-4, -3, -2, -1, 0, 1, 2, 3, 4		
18	Balance change	Family Balance Pre-Post Change	List	-4, -3, -2, -1, 0, 1, 2, 3, 4		
19	PC reading change group		List	Negative Change, No Change, Positive Change		
20	Writing activity change group		List	Negative Change, No Change, Positive Change		
21	Letter knowledge change group		List	Negative Change, No Change, Positive Change		
22	Kinder prep change group		List	Negative Change, No Change, Positive Change		
23						

Definitions

When ready to import the definitions, click the ' ' (Import Fields) icon at the top of the 'Set Fields' panel in the Descriptor Workspace and then follow the prompts to locate the file, open to review, check for errors, and submit to upload and save the information in Dedoose.

Next, to import Descriptor *data* from an Excel file you must create a file with column headers that correspond exactly to the Descriptor fields that you have defined and then contains all your Descriptor data.

Example of Excel File Format for Importing Descriptor Data

	A	B	C	D	E	F	G	H	I
1	ID	Child Sex	Ethnicity	Reading Language	Mother primary Language	General Home Language	Mother work status	Father work status	Home size
2	1.04	Female	Hispanic	Spanish	Spanish	Spanish	Not Working	Part Time	3
3	1.08	Male	Hispanic	English	English	Spanish	Full Time	Full Time	4
4	2.01	Male	Hispanic	Spanish	Spanish	Spanish	Not Working	Full Time	6
5	3.01	Male	African American	English	English	English	Not Working	Not Working	9
6	3.11	Male	African American	English	English	English	Not Working	Full Time	4
7	3.17	Male	African American	English	English	English	Full Time	Full Time	5
8	3.21	Female	African American	English	English	English	Not Working	Not Working	4
9	5.20	Female	Hispanic	Spanish	Spanish	Spanish	Not Working	Part Time	4
10	5.26	Female	Hispanic	Bilingual	Bilingual	English	Not Working	Full Time	7
11	5.27	Female	Hispanic	English	Bilingual	Spanish	Part Time	Full Time	5
12	5.32	Male	Hispanic	Spanish	Spanish	Bilingual	Not Working	Not Working	6
13	7.05	Male	Hispanic	English	Bilingual	English	Full Time	Not Working	5
14	8.03	Female	African American	English	English	English	Not Working	Not Working	3
15	8.07	Female	African American	English	English	English	Not Working	Part Time	3
16	10.06	Male	Hispanic	Spanish	Spanish	English	Part Time	Not Working	5
17	10.18	Female	Hispanic	Bilingual	Spanish	Spanish	Not Working	Full Time	4
18	10.22	Female	Hispanic	Spanish	Spanish	Spanish	Not Working	Full Time	6
19	10.24	Male	Hispanic	Bilingual	Spanish	English	Full Time	Full Time	7
20	10.26	Male	Hispanic	Spanish	Spanish	Bilingual	Part Time	Full Time	3
21	11.16	Male	Hispanic	Spanish	Spanish	Spanish	Not Working	Full Time	4
22	14.16	Male	African American	English	English	English	Not Working	Not Working	6
23	16.09	Female	Hispanic	English	Bilingual	Bilingual	Not Working	Not Working	6

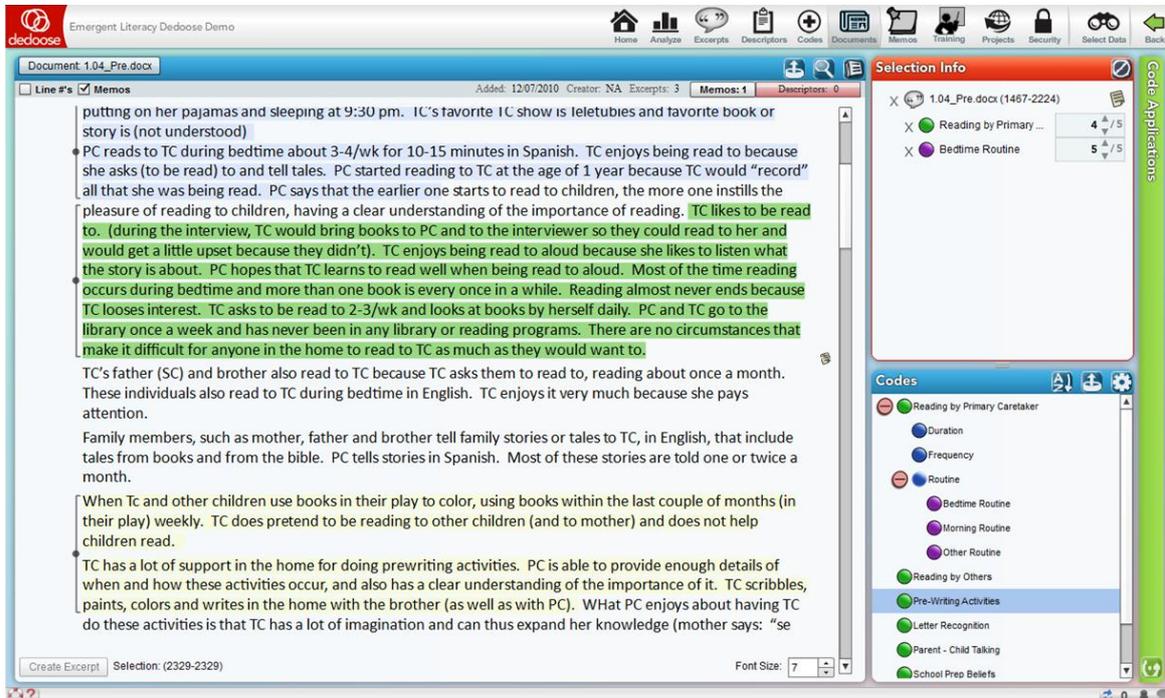
Click the ' ' (Import Descriptor Data) button at the top of the 'Descriptors in Set' panel in the Descriptors Workspace and follow the prompts to locate, open, review, and submit these data to your project.

Once descriptor data are in Dedoose, they can, and should, be linked to the qualitative resources with which they are associated. This linking can be accomplished from a variety of locations, but the most transparent is when viewing the

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qualitative resource itself. Ex. when viewing a document, video, or audio one will see a descriptor button. If the resource is not linked to a descriptor, the button will show a '0' to indicate the resource is not yet linked to any descriptor and will be colored red as a visual cue (see below).

Document Viewing and Linking to Descriptors



Click the **red**-colored 'Descriptor' button in the top-right corner of the document panel (see above) to establish the linking. Again, for Dedoose to generate all the great charts and graphs based on descriptor data and your coding activity, these links need to be established. After clicking this **red** Descriptor button, you'll be taken to a list of your descriptor data. Locate and click the 'Link' button for the appropriate descriptor, close the descriptor list pop-up, and you are ready to go:

Descriptor Linkages									
Options	Linked	ID	Child Gender	Ethnicity	Phase	Reading Language	Mother primary Lang	General Home Lang	Mother work status
Descriptor Sets	<input type="checkbox"/>	1.04	Female	Hispanic	Pre	Spanish	Spanish	Spanish	Not Working
Community Characteristics, Fields: ...	<input type="checkbox"/>	1.08	Male	Hispanic	Post	English	English	Spanish	Full Time
Participant Demographics, Fields: 2...	<input type="checkbox"/>	2.01	Male	Hispanic	Pre	Spanish	Spanish	Spanish	Not Working
	<input type="checkbox"/>	3.01	Male	African Ameri	Post	English	English	English	Not Working
	<input type="checkbox"/>	3.11	Male	African Ameri	Pre	English	English	English	Not Working
	<input type="checkbox"/>	3.17	Male	African Ameri	Pre	English	English	English	Full Time
	<input type="checkbox"/>	3.21	Female	Hispanic		Bilingual	English	Spanish	Part Time
	<input type="checkbox"/>	3.21	Female	African Ameri	Post	English	English	English	Not Working
	<input type="checkbox"/>	5.20	Female	Hispanic	Pre	Spanish	Spanish	Spanish	Not Working
	<input type="checkbox"/>	5.26	Female	Hispanic	Pre	Bilingual	Bilingual	English	Not Working
	<input type="checkbox"/>	5.27	Female	Hispanic	Pre	English	Bilingual	Spanish	Part Time
	<input type="checkbox"/>	5.32	Male	Hispanic	Pre	Spanish	Spanish	Bilingual	Not Working
	<input type="checkbox"/>	7.05	Male	Hispanic	Pre	English	Bilingual	English	Full Time
	<input type="checkbox"/>	8.03	Female	African Ameri	Pre	English	English	English	Not Working

Excerpting, Coding/Tagging, and Dedoose Analytics

Defining and coding excerpts in Dedoose is a simple text-blocking and code-application activity. Very straightforward, as is the case for other qualitative data analysis software packages. The interactive data visualizations built into Dedoose

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which capitalize on the links between qualitative resource and descriptor data and all the traditional excerpting and coding/tagging activity on these resources is one of the truly unique features of Dedoose.

To take advantage of these analytic features, simply conduct your basic text block, video clip, or audio clip identification, apply whichever codes/tags are appropriate for distinguishing these 'pieces' of your qualitative data, and be sure the resources are properly linked to their associated descriptor data and you are ready to take advantage of the Dedoose analytics described in the 'Interrogating the Dataset, Queries, Searches' section to follow.

[See Exercises based on data interrogation in Chapter 13.](#)

Dedoose and Chapter 13 – Interrogating the Dataset

Chapter 13 discusses interrogation that can happen at varied levels and at many moments during analysis. Interrogation can happen by simply retrieving coded data; in more advanced ways or with a focus on mixed methods interrogations also happen in terms of discovering relationships between codes which co-occur in some way in the data. You may need to compare codes across subsets of data (indicated by the application of variables, descriptors or attributes to data). Types of queries vary from simple to complicated tasks; summarized, charted information where the results are already available in the background, is available in Dedoose. *See all coloured illustrations (from the book) of software tasks and functions, numbered in chapter order.*

Sections included in the chapter:

Incremental and iterative nature of queries

Creating signposts for further queries

Identify patterns and relationships

Qualitative cross tabulations

Quality control, improving interpretive process
Tables and matrices
Charts and graphs

Overview

The Dedoose Analysis Workspace menu provides quick, easy access to the variety of charts, tables, and plots that are pre-programmed into Dedoose. Once documents have been linked to descriptors and excerpting activity has taken place, these data visualizations automatically populate. The different reports and various controls within each provide a variety of flexible approaches to understand, organize, and present your data.

Access the Analyze Workspace by clicking the 'Analyze' button on the Dedoose main menu bar:



The sets of interactive charts are organized in a folder system so it is easy to find what you are looking for depending on the immediate needs of your work. Simply activate the chart, table, or plot you are interested in, select the variables of interest (where appropriate) and other specifications given the controls of the particular chart, and you are analyzing your data. Then, to drill into the qualitative excerpting and coding represented in the visualization, just click the bar, cell, bubble, or slice of pie to pull up the underlying excerpts. From the resulting chart selection reviewer, you can browse, recode, or export the data for use in other software:

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In Depth

The Dedoose Analyze Workspace is where all your data come together for many of the activities related to exploring, analyzing, and interpreting project data and preparing for presentation. Like many Dedoose features, how Dedoose best serves each investigator is personal and different approaches will fit different styles and needs. The charts, tables, and plots in the Analysis Workspace will serve virtually all of the needs for many researchers in terms of presentation graphics, filters, and other tools for the syntheses of research findings. The best approach to discovering how your style will be served by Dedoose is to explore and experiment using the main Analyze Workspace features that will be described and illustrated here. A noteworthy point is that the results of all exploration and analyses can be exported into text, MS Excel, or PDF formats for use in other software.

The Dedoose Analysis Workspace menu provides quick, easy access to the variety of charts, tables, and plots that are pre-programmed into Dedoose. These displays were designed to provide the researcher with fast access to many commonly applied approaches for exploring, filtering, analyzing, and presenting data. You will quickly see how you can use Dedoose to achieve both very general and very specific 'looks' at your data. The different reports and various controls within each provide a variety of flexible approaches to understand, organize, and present your data.

Analyze Workspace Features

Access the Analyze Workspace by clicking the 'Analyze' button on the Dedoose main menu bar:



The Analyze Workspace offers a number of chart 'sets' based on the various sections of the database. The sets are organized in a folder system so it is easy to find the charts, tables, or plots you are looking for depending on the immediate needs of your work. Here's an example of the charts in the 'Mixed Methods' set.

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Dedoose Analyze Workspace Mixed Methods Chart Menu



It is also worth noting that a number of the charts, tables, and plots will appear in multiple sets within the 'Chart Selector.' For example, the 'Excerpts Per Document' chart will appear in both the 'Document Charts' and 'Excerpts Charts' folders.

Analyze Workspace Charts, Tables, Plots

Overview

The Dedoose Analyze Workspace offers a wide variety of data visualizations. These visualizations can be used to examine the general nature of your data, understand how the code system has been applied to the qualitative content, and expose patterns of variation in the qualitative data and activity across sub-groups. They can also be used for the presentation of research findings, and as filters or windows to drill deeper into findings.

These charts, tables, and plots are informative, intuitive, and transparent. They can be used in numerous combinations and be flexibly adapted to address particular research questions.

For many of the charts, Dedoose provides the ability to toggle between a bar or pie chart visualization. The highlighted section of the screen shot below (in upper right corner) shows the control buttons for pie chart, bar chart, and export.

TRANSPARENCY? Fundamental to the Dedoose design is transparency and what this means is that users should move smoothly and knowledgeably through all the data that Dedoose helps bring together. In the Analysis Center and throughout Dedoose, every bar, slice of pie, bubble, and cell in a table is 'HOT,' i.e., dynamically linked to the underlying qualitative data. One click on the item pulls up the associated qualitative content that is represented by the bar/slice/bubble/cell which can be exported (alone or alongside the visualization) or analyzed further to more deeply understand the nature of the observed research findings.

Chart Expansion and Export

Further, throughout Dedoose, there are two controls in the panel header for exporting and viewing the chart in full screen:

- Clicking the '🖥️' (Full Screen) button expands the chart for easier viewing

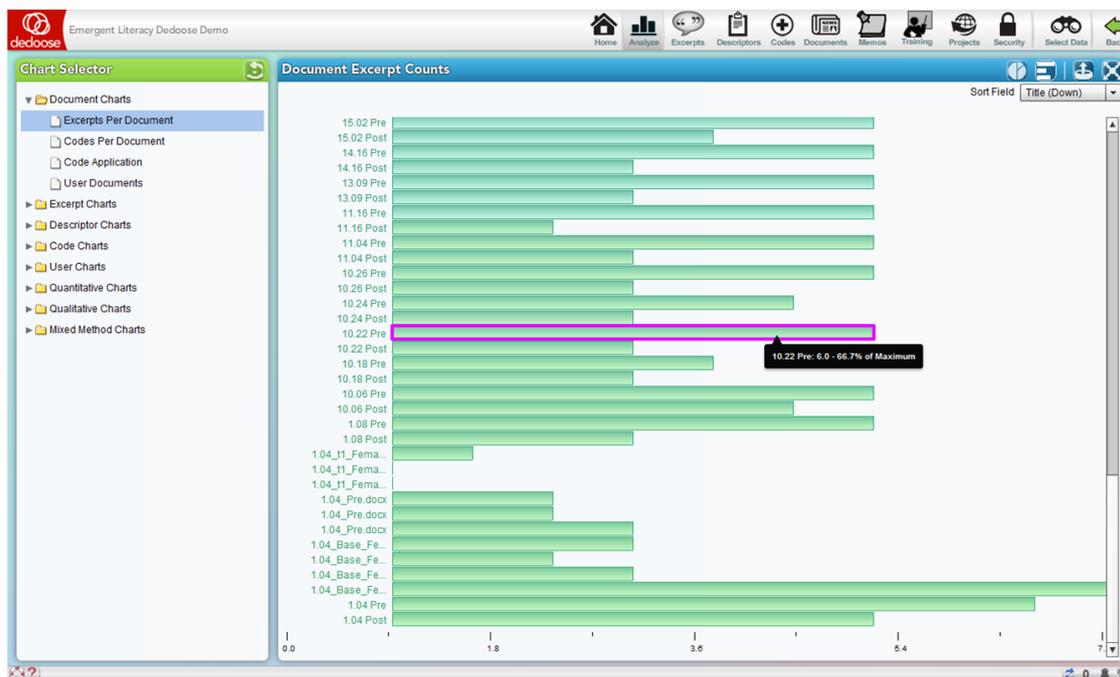
- Clicking the 'Export' button creates a MS Excel file with the bar charts and activates prompts to download and save the file on your local computer – just follow the prompts and you've got an Excel version of the chart and all underlying data for further analysis or presentation
- For charts representing multiple sets of data, like the one below, this 'Export' button allows for exporting just the individual chart with which it is associated.

Key Dedoose Chart, Tables, and Plots

Again, while a number of the data visualizations will appear in multiple sets within the 'Chart Selector' when the data involved are common across sets, we will introduce the key types here before moving on to a more detailed description of what can be found in each set of charts/tables/plots.

Frequency Charts

The charts in this screen shot represent the relative number of excerpts have been created by document. Again, each slice of the pie or bar in a chart is 'hot' – a simple click immediately pulls up and presents the underlying excerpts to facilitate interpretation of the graphical image.



Frequency Tables

This next screen shot is an example of one of the many Dedoose frequency tables; this one presents, for each document, the frequency with which each code has been applied to an excerpt.

See cross tabulation tables below.

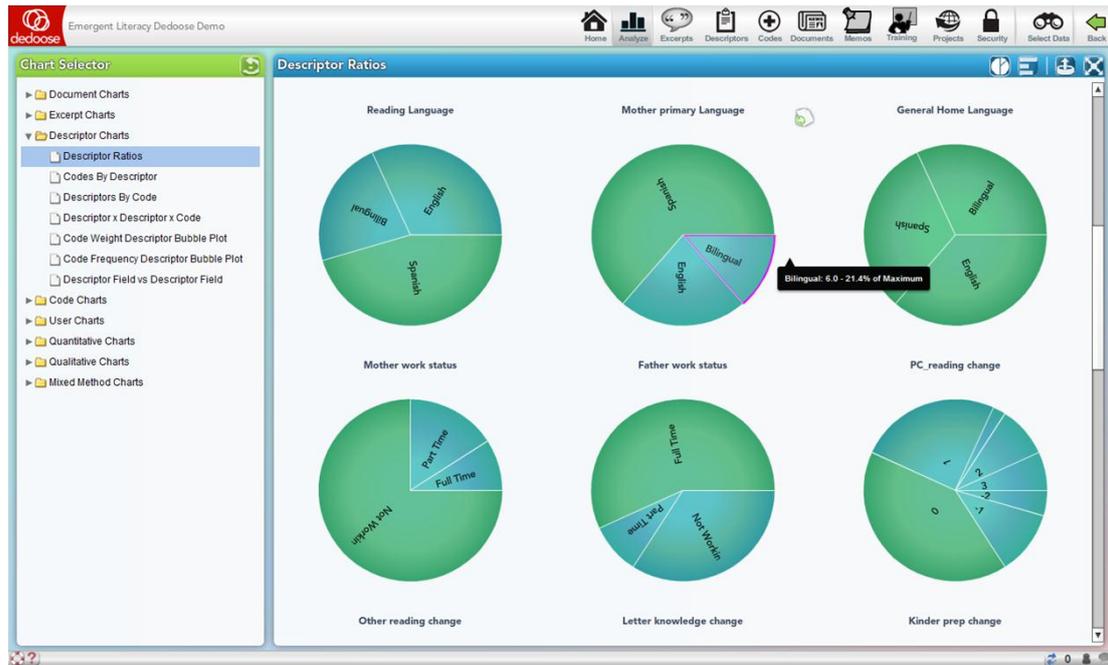
Documents	AMPAS	AMPAS Values	AMPAS Goals	AMPAS Visual Identity	AMPAS Purpose	Brand Elements	AMPAS Marks	AMPAS Language	AMPAS Names	AMPAS Promotion Activities	AMPAS Messages	AMPAS Colors	AMPAS Assets	Other Assets	Oscar as an Asset	People as Assets	AMPAS Programs_Collections	Great Quotes	Brand Element Consistency Solutions	Outreach Solutions	Evolution Benefits	Museum Project as Opportunity	Risk Tolerance	Identity Flexibility	Broadcast Evolution	Commercialization Solutions	Messaging Solutions	AMPAS Challenges	Museum Project Challenges	Evolution Costs as a Challenge	Risk Inolerance as a Challenge	Identity Challenges	Resistance to change due to or	Vision Challenges
AD_7.21	1	2		1	2		1			1	1							1	2				2	1			4			1	1	2		
9_BD_7.15		8	3	1	5	7	1		2		5		3		1	1	2	5	5	1	1	1	1	1		2	13	1	2		8	2		
8_MG_7.15		7		2	3		1		1		8								1	3		4		1		3					7			
7_CK_7.15	2	7	2	8		17	4			5	15	3	9	2	6		5	6	16	11	6	3	3	1	7	2	3	5	12		1	3	9	2
6_TM_7.14	1	5	5	5	2							1	9	1	2	3	6	8	12	4	9	3	1	9	2	1	5	9			6		1	
5_TC_7.14		1	1	2																		3	1			2				2	5	1		
4_EH_7.14		1	1	2	1		2			4	3				2	4	2					1	5		1		4					1		
3_RR_7.14	10	10	4	5	5	7	1	1		1	5	1	3				3	4	5	1	1	1	2		1	14	2		1	7	3			
34_GC_7.31	3	1			3													1	6	1	1	1	2	6		11	1		2	1	3	2		
33_DW_7.30	1		1		1																	3	4	3	1		1	1	1	8		1	3	1
32_F_7.30	8	1		7	3	12	6	1	2	5	1	3	5		3	3	3	4	2						1	10	2			7		1		
31_RO_7.29	5	4		1	1						1		2		2	1		2	7	1	5			1	3	6	7			4	1			
30_RR_7.28	5	3	1		4	3				1		11			4	3	5		4		1			2	1	9	1		1	1	1			
2_HC_7.14	6	3	2		4	4		1	1		2		5		1	2	3	2	3		2		3		2	11	1		1	6	1			

Tables like these are useful in searching for an understanding of how a code system has been applied across documents. Often, users may feel that it is easy to recall the ‘story’ in qualitative content and their coding activity when they have just finished working with a document. However, remembering the work one did with interview #1 after working with interviews #2 to #10 is very difficult. Moreover, team members cannot be familiar with the work done by others. Where mixed method analysis is focused on the results **across** documents, emerging patterns in how a code system has been applied can play an important role in data analysis. It is under these circumstances where presentations of data as in this Code by Document table can be extremely illuminating. As a reminder: each cell in the table is ‘hot’ – that is, dynamically linked to the excerpts represented in the cell. When intriguing or informative patterns are observed, clicking a cell immediately pulls up the underlying excerpts to facilitate a deeper appreciation for the emerging pattern.

Observing these distributions can begin to tell you a great deal about what is contained in your documents and how the conceptual framework you have represented in your code/tag system has been applied to (or maps onto) your source data. You can readily identify places in your code application where there is more and less ‘action’ in the coded excerpts.

Descriptor Ratios

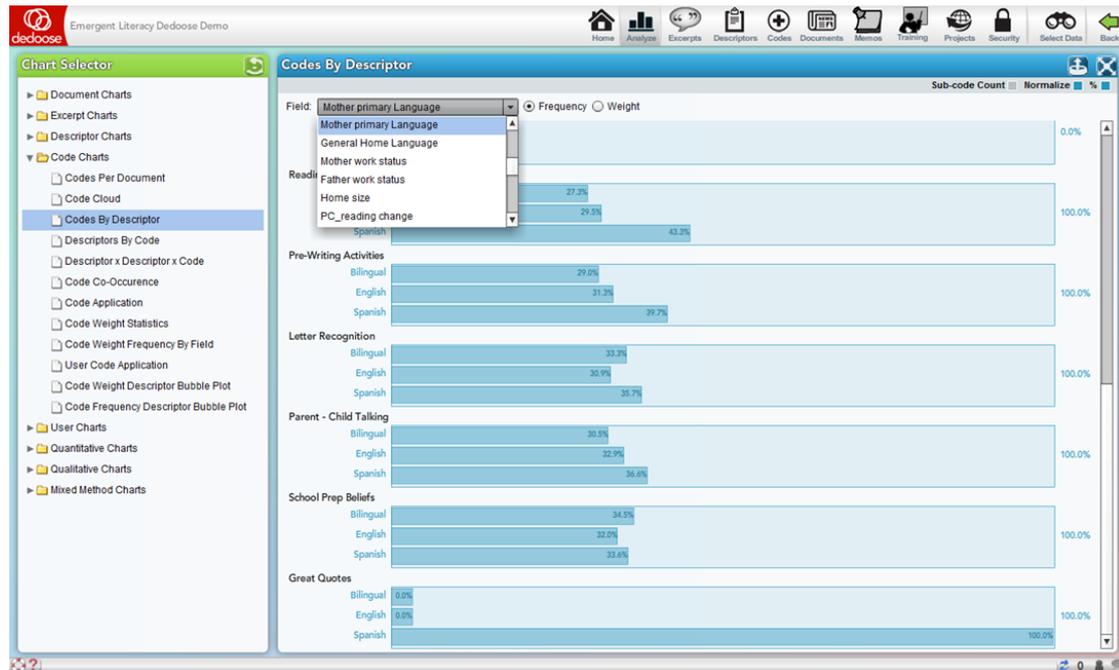
Descriptor ratio charts present the relative numbers of each sub-group for each of a project’s list-type (categorical) descriptor fields. These visualizations facilitate an understanding of variation within a project sample and can serve as filters or windows on the data provided by a particular sub-group for segmentation or sub-group specific analysis.



Code Application by Descriptor Charts

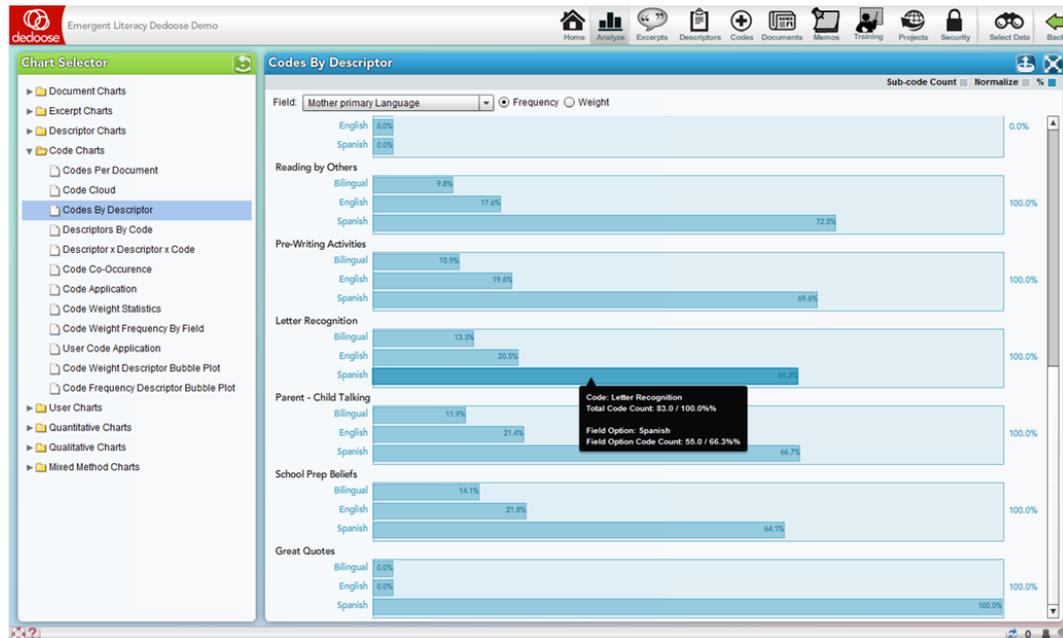
The Code Application by Descriptor charts (including the charts using *Dynamic* descriptors) have a number of options and can be some of the most useful visualizations for analysis, interpretation, and communication/presentation of research findings. Essentially, these charts represent the number of excerpts that have been associated with a particular code separately for each sub-group of a descriptor variable. For example, we can see the charts for the codes Pre-Writing Activities, Letter Recognition, ... in the screenshot below broken out by the relative number of excerpts coded for each of the 'Mother Primary Language' groups of 'Bilingual,' 'Spanish,' or 'English.'

The drop-down menu, allows for an immediate reconfiguration of the charts by selecting any of the list-type or grouped number or date/time descriptor fields in the project.



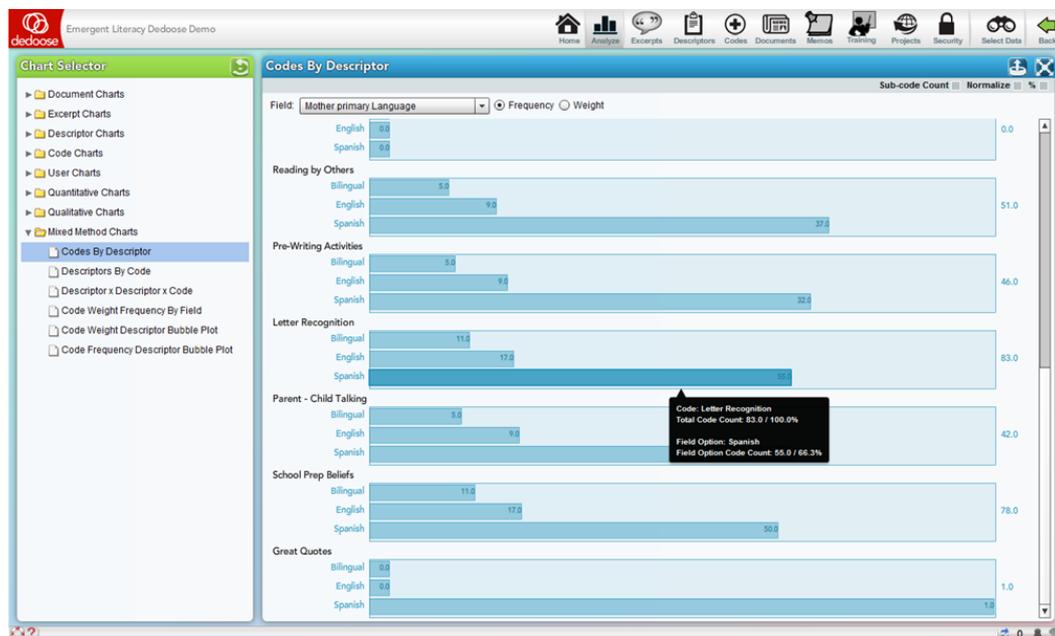
Other important controls for these charts can be found in the panel sub-header showing radio buttons next to the drop-down menu to switch the chart from relative excerpt count to average weights applied and check boxes for 'Sub-code Count,' 'Normalize,' and '%.' By default, the 'Normalize' and '%' boxes are checked.

- The *Sub-code Count* checkbox (which defaults to 'off') allows the inclusion of all code children, grandchildren ... to be included in the visual – essentially collapsing upward in the code tree. For example, if the Parent-Child code had child codes associated with it in the tree, all excerpts coded with Parent-Child Talking AND the child codes would all be included in the chart for Parent-Child Talking
- '*Normalization*' adjusts each bar based on the relative number of cases in each sub-group. Simply, a graphical representation for code application frequency by sub-group is relatively meaningless if there are unequal numbers of individual cases across each sub-group. For example, in this study, the 'Spanish' group for 'Mother Primary Language' is disproportionately large (representing 64% of the total sample). Turning off the normalization adjustment results in a possibly misleading visualization. Below is the same chart as above with normalization turned off:



This 'non-normalized' chart, as compared to the original, appears to suggest a markedly high frequency of 'Letter Recognition' coded excerpts for the Spanish group. Hence, normalized charts provide a more unbiased perspective of the underlying data

- The '%' check box converts the chart from a raw count presentation to a percentage basis presentation, as shown in the following snapshot of the same chart with the percentage view deactivated:



Code Application by Descriptor Charts for Dynamic Descriptor Fields

The Code Application charts across dynamic descriptor fields are a special case of code application by descriptors. These charts are markedly different in their meaning. As dynamic fields are designed for longitudinal analysis, the charts are presenting change over time in the code or weight application activity for each code.

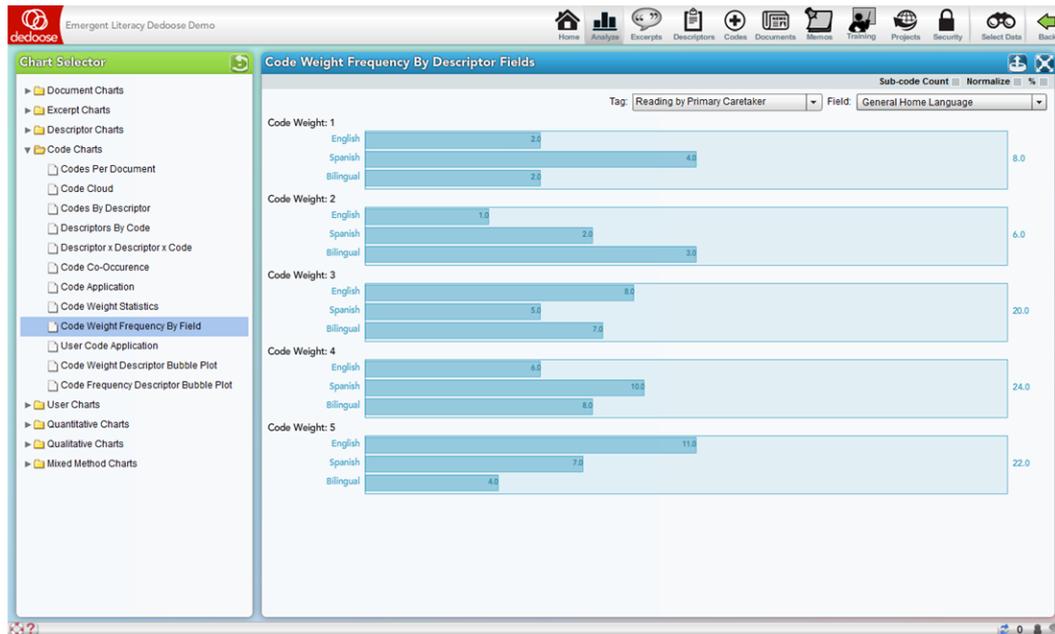
Descriptor by Descriptor by Code Application/Weight Charts

The Descriptor by Descriptor by Code Application/Weight chart has a great set of options for drilling even deeper into variations across population subgroups. These 'nested' charts allow for examination of the qualitative data and coding/weighting activity based on two descriptor variables. The example below shows the relative average weight assigned to excerpts coded with 'Reading by Primary Caretaker' across 'Mother Primary Language' within 'Mother Work Status' subgroups. These charts can expose variation in value, sentiment, importance, quality, or anything you have used the weighting system to represent) at deep levels in the overall population. In the example, we see an interesting interaction pattern with variations in the levels of primary caretaker reading quality dependent on both mother language and work status (i.e., excerpts were rated generally higher – better quality reading practice – for those coming from families with part-time working and Spanish speaking mothers and full-time working bilingual speaking mothers as compared to other sub-groups).



Code Weight Frequency by Descriptor Field

The Code Weight Frequency by Descriptor Field Charts allow for a focus on the code weight distribution across descriptor field categories. The following example is based on the 'Reading by Primary Caretaker' code and the 'General Home Language' descriptor field. The resulting chart shows the number of cases in each descriptor sub-group, i.e., Bilingual, English, and Spanish, for each Reading by Primary Caretaker code weight. The bottom set of bars shows that of the 22 excerpts assigned the Reading by Primary Caretaker code with a weight of '5,' 11 were English speakers, 7 were Spanish speakers, and 4 were bilingual speakers at home.

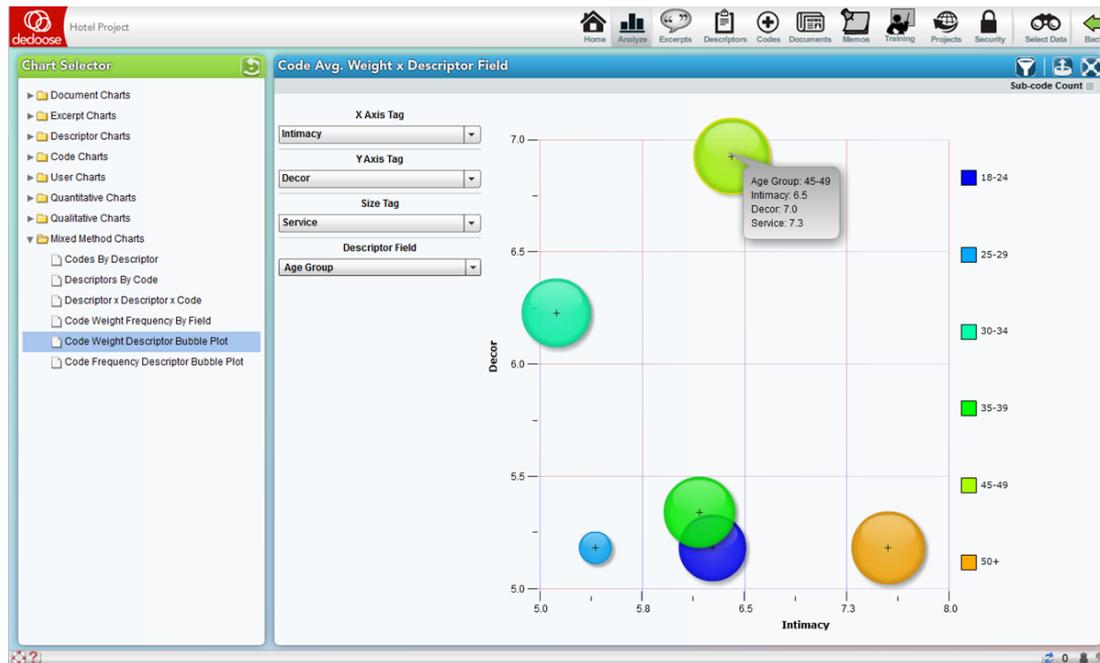


The Code Weight Frequency by Descriptor Field charts is a prime example of how mixed methods can expose important patterns in research data. Well designed code weight systems are 'grounded' on the underlying qualitative data – they are based on data from the sample population. Valid and reliably applied weight systems:

5. Help generate clear illustrations of how coded qualitative content is distributed as a function of the associated weighting system
6. Represent quantitative distributions of cases within the sample population across code applications, i.e., defining and exposing patterns of specific code application across the population – providing both numerical information on cases based on the code's content and a 'grounded' definition of each weight value
7. Expose descriptor sub-group variation in the application of each code
8. Provide numerical representations of qualitative content that can be exported for use in other quantitative analysis

Code Weight by Descriptor Bubble Plots

The Code Weight by Descriptor Bubble Plots allow for a four-dimensional exploration and presentation of project data. These plots are based on the average weights associated with the selected codes across the selected descriptor field sub-groups.



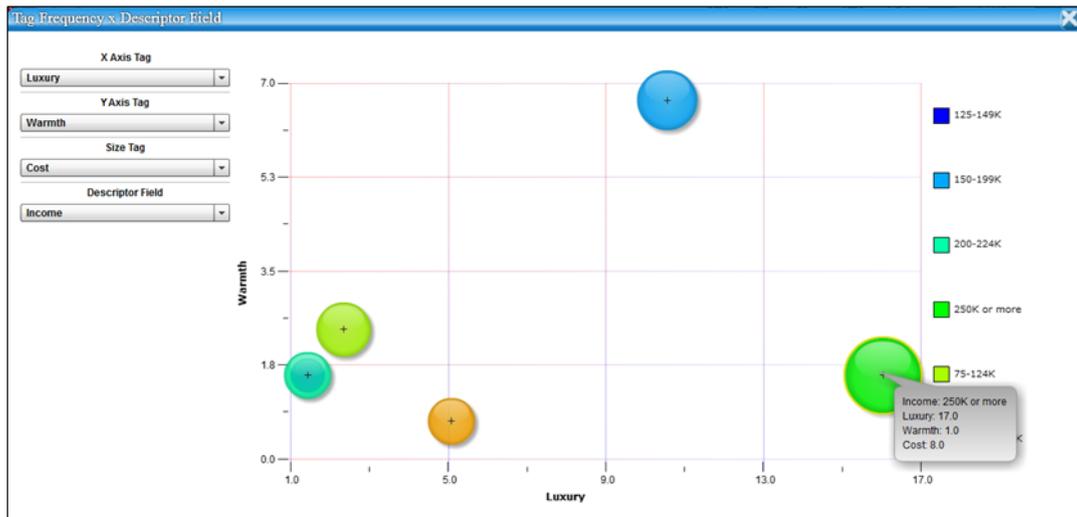
In the above example, from a study on the hotel characteristics reported as desirable across age and income level, the bubbles represent different age groups. The size of the bubbles represents the average weight associated with application of the 'Service' code, which has been applied when service was mentioned as a desirable characteristic and a weighing to indicate the reported level of importance. The X and Y axes show the average weights associated with the application of 'Intimacy' and 'Décor' codes respectively. The highlighted bubble indicates that respondents 45-49 years of age or report relatively high importance for 'Service' and 'Décor' and only moderate importance for 'Intimacy' as compared to the 50+ age group who rated both 'Service' and 'Intimacy' relatively highly, but 'Décor' was far less important in their hotel decision making.

Where weight systems have been associated with code application (e.g. to indicate importance, strength, sentiment, value), these plots can quickly expose complex multi-dimensional relations between variables across sub-groups.

Easily and quickly modified through the drop-down menus, bubble plots can communicate a tremendous amount of information, be used to access the excerpts represented by a particular bubble, and be used as filters for further analysis.

Code Frequency by Descriptor Bubble Plots

The Code Frequency by Descriptor Bubble Plots allow for a four-dimensional exploration and presentation of project data based on the frequency with which particular codes were applied to excerpts across the selected descriptor field sub-groups.



In the above example, from a study on the hotel characteristics reported as desirable across age and income level, the bubbles represent different annual income groups. The size of the bubbles represents the frequency with which the 'Cost' code was applied to excerpts within each sub-group. The X and Y axes represent the frequency with which the 'Luxury' and 'Warmth' codes were applied respectively. The highlighted bubble indicates that in comparison to other income groups, respondents reporting annual incomes of \$250K or greater discuss issues of Luxury and Cost in hotel evaluations relatively more frequently and issues of Warmth relatively less frequently.

These plots quickly expose complex multi-dimensional relations between the applications of codes across sub-groups and facilitate the identification of important patterns in respondent opinions regarding the research questions.

Easily and quickly modified through the drop-down menus, bubble plots can communicate a tremendous amount of information, be used to access the excerpts represented by a particular bubble, and be used as filters for further analysis.

Code Co-Occurrence Table

The Code Co-Occurrence Table provides information about how the code/tag system was used across all project excerpts. These symmetric, code by code, matrices present the frequencies for which all code pairings were applied to the same excerpt. Such a display can expose both expected and unexpected patterns in which two codes were (or were not) used together. These patterns illuminate how concepts related to the research questions and represented by the code system are combined in the natural schema (i.e., cognitive frameworks that help organize and interpret information) activated by study participants as they respond to interview or focus group protocols.

What does it tell us about our data and research questions when we discover that that codes 'A' and 'B' co-occur at relatively low rates compared to codes 'A' and 'C'? Dedoose facilitates the process of addressing questions like these quickly and with a variety of attributes to suit the needs of different researcher preferences. It is also important to note that by default this table also includes counts for overlapping excerpts. That is, the cell values represent 'hits' for excerpts coded with both the associated codes AND excerpt with one of the codes that overlaps with an excerpt coded with other code. This feature can be deactivated by clearing the 'Include Overlapping Excerpts' box in the upper right corner of the panel.

Code Co-Occurrence Include Overlapping Excerpts

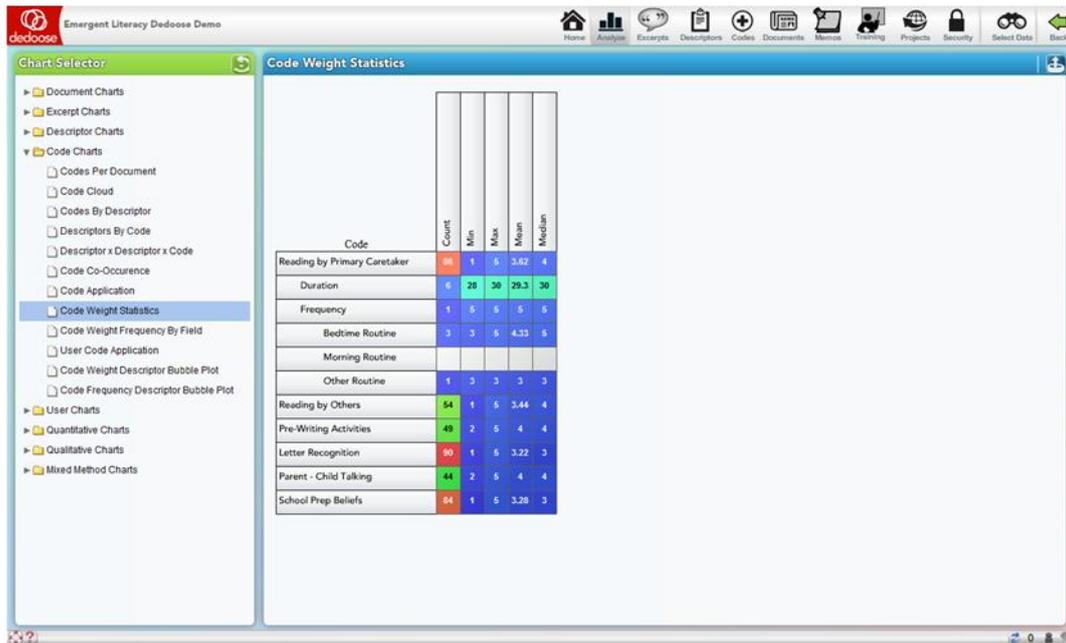
Codes	Parent Education History	Reading by PC	Reading Frequency	Reading Routine	Bedtime Reading Routine	Other reading routine	Morning reading routine	Reading Duration	Goals and Values	Talking with Child	Letter Recognition Skills	Stability	Pre-Writing Activities	Reading by Others	School Preparation	Parent Satisfaction with Own Educa	Parent_Teacher Communication	Resources	Intervention Effects	Similarity to Parent Child Rearing	Great Quotes	Totals	
Parent Education History									1													1	4
Reading by PC			16	1	10	14	2	11	3	13	7	1	4	11	3								108
Reading Frequency		15		1	5	6		6	1	5	3	1	1	8	1				1	1			56
Reading Routine		1	1		1					1	1												5
Bedtime Reading Routine		10	5	1		6	1	5	1	3	3		1	10	4					1			53
Other reading routine		14	6		6			5	1	6	4		1										11
Morning reading routine		2			1				1	3			2										11
Reading Duration		11	6		5	5				1		1		7	1				1	2			42
Goals and Values		1	3	1		1	1	1		3	1	2		2	5	1			3	2	2	2	31
Talking with Child		13	5	1	3	6	3	1	3		11		4	5	8		1		4	1	3		72
Letter Recognition Skills		7	3	1	3	4			1	11			13	3	5					7			60
Stability		1	1					1	2										17				23
Pre-Writing Activities		4	1		1	1	2			4	13			1	11					3			41
Reading by Others		11	8		10	5		7	2	5	3	1	1		3				1	1			60
School Preparation		1	1		4	4	2	1	5	8	5		11	3		3	1			8	1	1	61

For example, the highlighted cell in the table above indicates that 10 excerpts or overlapping excerpts were coded with both the 'Bedtime Reading Routine' and 'Reading by Others' codes. This pairing's relatively high frequency indicates that as participants are thinking and reporting on one of the concepts, they often discuss thoughts about the other. Such a combination suggests that an overarching schema which includes both concepts is being activated as participants formulate their responses. Drilling down to the underlying qualitative data (by clicking the cell and reviewing the excerpts) provides a deeper understanding of participant reports and the naturally occurring patterns in their thought processes.

Observation of patterns in how the code system was applied can illuminate a wide variety of connections within (a) the nature of the conceptual framework represented by your code/tag system and how it was applied and (b) the nature of the data themselves. Again, patterns like these are unlikely to be noticed and would be extremely difficult to track when you you're your team) are engaged in the coding process. Yet in the analysis stage, many researchers seek to find such patterns to help formulate the organizing principles they will use to understand and present their findings and how research participants naturally describe their responses to key research questions.

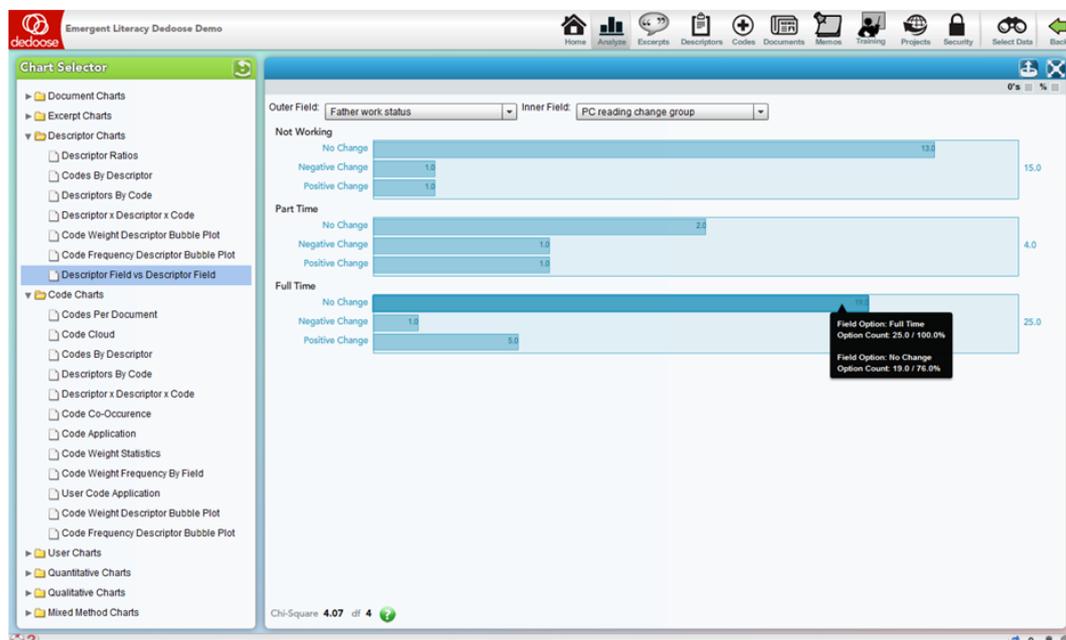
Code Weight Statistics Tables

The Code Weight Statistics Tables offer another means of examining and understanding coding activity in the project. These tables display basic counts and, where appropriate, statistics of how the weights for each code were distributed across the code applications. The application count cells are also great shortcuts for activating a code-specific filter or pulling up all excerpts associated with the code for further exploration.



Descriptor Field vs Descriptor Field

The Descriptor Field vs Descriptor Field chart is essentially a cross-tab analysis of the relative frequency of member in each sub-group plotted for two descriptor fields – one nested within the other. For example, in the screen shot below, you see ‘Father Work Status’ graphed against ‘PC Reading Change Group.’ The result of the analysis is $X^2 = 4.07$ with 4 degrees of freedom – not a statistically significant relationship. This non-parametric statistical analysis is commonly reported in the description of a research project participant population and in discovering how the population may have interacting characteristics that should be understood and considered in the interpretation of study results.



Eli Lieber 2014