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ADULT LEARNING AND THE COMPILATION AND RETRIEVAL OF DATA – A PRACTICAL SYSTEM FOR QUALITATIVE RESEARCHERS

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Abstract

This paper outlines a process that to assist adult learners and researchers to capture, streamline and retrieve data for the analysis of content from various resources of information encountered in research. The system is described including a rationale for its benefit to qualitative researchers utilising multiple sources of data. The system is designed mainly to assist the academic expedition of postgraduate students predominantly engaged in qualitative research. It covers theoretical aspects of adult learning principles combined with a systematic method for managing qualitative data. Working from the assumption that adult learners are time-poor and likely to be working full-time, this study discusses these learners' need for an efficient method of recording and retrieving information and provide and provide a straightforward, cataloguing process which the author developed when conducting postgraduate research.

Key words:

Qualitative research, adult learners, compiling, retrieving and organising research data, grounded theory,

Word Count:

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Introduction

This article is based on my experience as a time-poor adult learner. It is underpinned by theories concerning adult learning principles, including Knowles's (1970) ideas on andragogy and Hase and Kenyon's (2000) on heutagogy, as well as commentary by Delahaye (2005) and others. My experience as a postgraduate, qualitative researcher induced me to develop an effective individual retrieval system which I used at both masters and doctoral postgraduate levels and which I continue to draw on years later for multiple academic purposes.

As an adult learner I needed to discover and know more in my field as well as focus to a greater degree on material relevant to my vocational and personal aspirations. For others, vocational and personal aspirations may not be relevant. However, for my purposes, I needed to be highly organised in compiling a considerable array of data in such a way that I could easily retrieve it both for academic and vocational use.

While the article's focus is on assisting postgraduate students, the method also has wider application for persons compiling data for an array of purposes. The data retrieval system could also be very useful for a wide array of people in numerous occupations.

Rationale

The type of data recorded in my research using the process that is described below drew together an extensive array of comparative material: this included journal publications, newspaper articles, reports, websites, public speeches, public radio broadcasts, government memoranda, Hansard (which is the recording of politician s in Australian parliaments), and case study informant interviews. The data also included information presented informally to me as a 'trusted' person working in the field as a participant observer. The task I was confronted with was to record and categorise this disparate data in various computer-based and hard-copy forms, and then to access and use it in other forms as I later needed, both for the purposes of postgraduate research and my job. These two aspects often typify the needs of adult learners (Knowles 1970).

The system outlined below aims to assist the process of refining data that supports the gathering of comprehensive information relevant to a broad area of research. The system covers not only the need to record and categorise a broad range of data but also a process for discounting information at a later stage as knowledge grows and it is considered to be less relevant to the area of inquiry, or of limited importance. Establishing the worth of research data is an unavoidable aspect of post-graduate study particularly since often, while the field of inquiry may be clearly identified, the breadth or scope of the topic of inquiry may not be clear to a student at the start of research. This is often the case.

Characteristics of Adult Learners

According to Knowles (1970, 1990), adult learners are self-directed and responsible for their learning decisions. Knowles (1970) coins the term andragogy to describe this self-direction.

Andragogy is term that describes about how adults learn. The term is linked to a German grammar teacher Alexander Kapp (Knowles, Holton, and Swanson 1998). Kapp used the term to explain Plato's

theory on education theory (Knowles, Holton, and Swanson 1998). In 1921 andragogy reappeared as a term when a social scientist named Eugen Rosenstock, also from Germany, claimed that 'adult education required special teachers, special methods, and a special philosophy' (Knowles, Holton, and Swanson 1998, 59). Discussion of andragogy continued in adult education from what was known then known as Yugoslavia. Dusan Savicevic, Ph.D., first discussed the concept in the United States with Knowles in 1968 (Knowles 1989, p.79, Hall of Fame 2008). This had significant impact on Knowles.

> '… in 1967 I had an experience that made it all come together. A Yugoslavian adult educator, Dusan Savicevic, participated in a summer session I was conducting at Boston University. At the end of it he came up to me with his eyes sparkling and said, 'Malcolm, you are preaching and practicing andragogy.' I replied, 'Whatagogy?' because I had never heard the term before. He explained that the term had been coined by a teacher in a German grammar school, Alexander Kapp, in 1833 … The term lay fallow until it was once more introduced by a German social scientist, Eugen Rosenstock, in 1921, but it did not receive general recognition. Then in 1957 a German teacher, Franz Poggeler, published a book, Introduction into Andragogy: Basic issues in Adult Education, and this term was then picked up by adult educators in Germany, Austria, the Netherlands, and Yugoslavia …' (Knowles 1989, p. 79).

Malcolm Knowles having learnt of the term andragogy, and it is reasonable to assume that he was comprehensively influenced if not encouraged by Savicevic, in 1968 used it in an article – "Adult Leadership," as indicated in the following quotation where Knowles (1970) acknowledges the influence stemming from "Yugoslavia" and Germany. From 1968 Knowles is well identified as the major expert on andragogy along with others such as Brookfield (1986), Mezirow (1991), Lawler (1991) Savicevic (1991) and Merriam (1999). Each of these theorists was active from an academic perspective in promoting the concept to improve adult learning.

> Skillful adult learners have known for a long time that they cannot teach adults as children have been taught. For adults a re almost always voluntary learners, and they simply disappear from learning experiences that don't satisfy them. So the practice of adult education has in fact been departing form traditional pedagogical practices for some time. And often this deviation has been accompanied by misgivings and guilt feelings over the violation of long established standards, for adult educators have not had a coherent theory to justify their treating adults as adults.

> This lack is now on the way to being remedied. For adult-education theorists in both Europe and (especially in Germany and Yugoslavia) and in North America are rapidly developing a distinctive theory of adult learning. And from this theory is evolving a new technology for the education of adults. To distinguish it from pedagogy this new technology is being given a new name: "*andragogy,*" which is based on the Greek word anēr (with the stem andr-) meaning "man." Andragogy is, therefore, the art and science of helping adults learn (Knowles 1970, p.38).

Often adult learners are familiar with an area they feel may be relevant to them but investing time in learning is generally a measure they consider carefully (Rogers 1969). The desire to develop and acquire new perspectives and viewpoints in greater depth is linked to a selective appreciation of why people need to learn and how they may wish to apply the knowledge and potential benefits derived from research. Such benefits may entail career moves, improved performance or just the basic desire to learn.

To Knowles (1999), adult learners contrast and compare theories rather than blindly accept such ideas, and they also try to draw conclusions from juxtaposing theory and practical experience. Observations of what is actually happening, and comparing these with academic commentary within the area of inquiry, are a hallmark of successful adult learning (Knowles 1970).

More recently, Hase and Kenyon (2000) discuss aspects of adult learning. They refer to the process of 'self-determined learning' as heutagogy: 'a heutagogical approach recognises the need to be flexible in the learning where the teacher provides resources but the learner designs the actual course she or he might take by negotiating the learning' (Hase and Kenyon 2000, p. 6). Their approach goes beyond Knowles's (1970) model of andragogy. For Hase and Kenyon, a key principle of adult learning is the desire both to have control over the experience and develop expertise whether that pertains to the learner's life or work:

> Thus learners might read around critical issues or questions and determine what is of interest and relevance to them and then negotiate further reading and assessment tasks. With respect to the latter, assessment becomes more of a learning experience rather than a means to measure attainment (Hase and Kenyon 2000, p. 6).

In Hase and Kenyon's view, a heutagogic style of learning (and teaching) is more appropriate to the requirements of the twenty-first century, particularly when the aim is to increase individual capability (2000). This is a salient point, given the internet has made available a vast range of information, a resource which requires the concomitant ability to access and manipulate data at a new level. The increasing array of resources available with the internet/knowledge revolution (Google, iPads, podcasts, blogs, twitter, blackberries, Facebook, e-journals) and other technological advances are changing research paradigms and putting new demands on adult learners to be more efficient in their research.

From a postgraduate research perspective, a heutagogic approach to teaching and learning encourages self-determined learning beyond the reality offered by most universities today (Hase and Kenyon 2000). It is these needs the proposed system aims to meet.

Relevance of a Data Retrieval System

Learners need to be able to access, record, understand, retrieve and engage in useful discussion about what they learn within their field(s) of inquiry. Postgraduate research, particularly qualitative research, is always pushing new boundaries fuelled by information hungry learners. In this context, such researchers need a fast and reliable and efficient system which saves potentially useful data and allows the retrieval of information for a range of uses and perhaps access component of the data some years later.

A speedy and comprehensive data retrieval system is relevant not only to time-poor adult learners but more broadly to organisations, including those of higher learning. As Nonaka (1994) notes, organisations depend on individuals and their knowledge base. Furthermore, 'Without some form of shared experience, it is extremely difficult for people to share each others thinking processes' (Nonaka 1994, p. 6). Delahaye extends this concept: 'governments, academics and managers are now recognising the unique and critical contribution that staff—and the vast majority of these staff are adults—make to the continued viability of organisations, societies, communities and the nation' (2005, p. 5).

In addition, as workforces age, organisations come to rely on the knowledge of mature age workers; however, for organisations to sustain their position and develop, it is important to establish ways of transferring this knowledge base to younger employees (Delahaye 2005). An individual computer (soft files) and filing system (hard files) retrieval system, which allows people to assemble information—such as a thesis, report, essay or presentation—and then selectively analyse and synthesise information, can cohere a body of knowledge in a particular field of inquiry. Put another way, the synthesis of data requires systematic processes to boost learning. Managing data in the first instance is important since this underpins its retrieval for later use enabling selective reassembling and synthesising information for a range of purposes.

Drawing on his former work with Choy (Choy and Delahaye 2003), Delahaye (2005) suggests adult learners differ from younger learners in that adult learners want control over what they consider they need to learn and how to distil meaning. This reflects the views of Hase and Kenyon (2000) who consider that sophisticated adult learning—heutagogy—takes place when the learner is totally immersed and interested in their field and uses discussions with academic supervisors, contacts with people when working or researching in the field, and discussion with others familiar with the area of inquiry as potential sources to boost their knowledge. Similarly, Knowles (1999) sees adult learners as having a strong need to comprehend the implications and meaning of what others are communicating.

These broad and distinct sources of information can be easily assimilated into the recording and retrieval system proposed here. The process embodies a method for recording data from soft (electronic) and hard (printed) data, including notes from discussion or of speeches in appropriate forums such as conferences, as well as podcasts from radio or other media.

The ability to record discussion from whatever source is important for qualitative researchers. Discussion is vital to uncover new information and perspectives. The accretion of knowledge in a planned and managed approach enables more sophisticated use of discussion in 'one-to-one' encounters with individuals, or with groups of people who are well qualified commentators in the area of inquiry (Houle 1961, 1980). From my experience, sharing a paper on a topic of mutual interest or being confronted with new and compelling concepts, insights or ideas from discussion often opens up new themes in research.

In sum, the electronic system proposed here covers data from a variety of sources. It can also adapt to changing insights and research themes. It provides a systematic process for focusing research from the outset, the ideal point to adopt its use.

This section has provided a rationale for the system drawing in adult learning principles and pointing out the obvious situation where access to more information on the internet, or through libraries, newspapers, journals, to name a few examples, is more attainable than ever before in history. This presents the need for a personal simple system to manage and retrieve data.

Research Methodology Context

The form of research that underpins this systematic categorising and retrieval of data is inductive data reduction – combined with grounded theory. To Thomas (2006) inductive data reduction is condensing raw data derived predominantly from text as an integral aspect of qualitative analysis and involves summarising the findings to establish and develop clear links to the formulation or construction of hypotheses. Inductive data reduction, alongside the systemic treatment of data proposed in this paper, enables the researcher to examine a case, or theme and systematically "ground" the data thus enabling analysis that avoids or limits speculative abstraction and to clarify the hypotheses by producing "reliable and valid findings" (Thomas 2006).

> The inductive approach is a systematic procedure for analysing qualitative data in which the analysis is likely to be guided by specific evaluation objectives.
> … *inductive analysis* refers to approaches that primarily use detailed readings of raw data to derive concepts, themes, or a model through interpretations made from the raw data by an evaluator or researcher. This understanding of inductive analysis is consistent with Strauss and Corbin's (1998) description: "The researcher begins with an area of study and allows the theory to emerge from the data" (p. 12). *Deductive analysis* refers to data analyses that set out to test whether data are consistent with prior assumptions, theories, or hypotheses identified or constructed by an investigator. In practice, many evaluation projects use both inductive and deductive analysis. (Thomas 2006, p. 238)

Grounded theory sits neatly with the systemic research approach outlined in this paper. To Collingridge and Grant (2008) grounded theory sees researchers revisiting the field continuously to gather added data and respond to fresh questions, compared to other forms of data collection. This is undertaken to the point where an academic judgment must be made and a line is drawn in the sand as information may be sufficient or unlikely to yield more data of use by added research (Collingridge and Grant 2008).

Grounded theory serves as a foundation for other qualitative research methodologies as the student progresses or expands their study (Collingridge and Grant 2008, Denzin and Lincoln 2005, Minichiello, Sullivan, Greenwood and Axford 2004). Grounded theory studies that build on existing theoretical concepts through comprehensive literature reviews, employ theory-based sampling procedures, follow well-defined data analysis procedures, clearly delineate how the findings apply to other contexts and

integrate results into existing research in a coherent fashion, and produce results that can be generalised with a greater degree of confidence (Collingridge and Grant 2008).

> The purpose of grounded theory is to build or expand on theories about human phenomena. Grounded theory research is unique in the sense that it is an iterative process wherein the grounded theorist continually goes back to the field to collect more data and answer new questions. This process continues until no new information is gleaned during the data gathering process. As the information is collected and organized "into a logical, systematic, and explanatory scheme," thematic categories begin to emerge. The categories are eventually organized into a comprehensive whole, thus creating a substantive theory grounded in the experiences of those familiar with the phenomenon of interest. (Collingridge and Grant 2008, p.394)

As the next section will show, grounded theory is a qualitative research methodology that is of considerable relevance to the systematic approach to research outlined in this paper. Grounded theory can co –exist with other forms of qualitative research whether it is ethnographic, constructivist, critical ethnographic, feminist or action research to name a range of other qualitative research methodologies (Denzin and Lincoln 2005).

The following section outlines the process or system. For the purposes of providing an example the system is based on a hypothetical topic and its associated research question.

A System for Compiling and Retrieving Data

Before the proposed system is outlined, to make the issue more tangible, imagine, for example, that the research topic is the Free Trade Agreement (FTA) between Australia and the Republic of Chile on Higher Education, and that the research question is as follows: *What are the negative and positive implications for higher education of the Free Trade Agreement (FTA) between Australia and the Republic of Chile from an Australian perspective?*

The following describes as simply as possible how the electronic retrieval system works. It is important, first, before initiating research, to identify likely themes that may relate to the area or topic of inquiry. The following are possible themes. Simply stated in this context themes mean topic areas within the study

or research area. They are not supposed to be locked in and can and should change and expand as knowledge of the topic accrues.

A.	Introduction
B.	Free Trade Agreement definition
C.	Historical Background
D.	Politics at Australian Federal Government level
E.	Economics at Australian Federal Government level
F.	Top 8 University Council Policy_www.go8.edu.au
G.	Research Methodology
H.	University Funding—Positive (+) and Negative (-) Aspects
I.	Student Funding—Positive (+) and Negative (-) Aspects
J.	Draft Conclusions

New themes may be added as research proceeds or some discounted:

K.	New Theme
L.	New Theme (etc.)

The initial list of themes focuses the research from its inception. It may also have uses for those who are compiling a literature review. The next step is to set up the system for recording and cataloguing information to be gathered during the process of research.

The proposed system uses four basic proformas: these differ according to the source of data. Proforma 1 is for electronic data, Proforma 2 for hard copy (or scanned) sources, Proforma 3 is for other sources, neither electronic nor hard copy (such as notes on discussions, interviews, case studies, participant observation, radio broadcasts, podcasts, public speeches and so forth). The fourth proforma is where the data is melded or synthesised drawing together the ideas and thoughts for each theme that the researcher considers to be worthwhile in terms of the research outcome and as a valid addition in terms of new information to an area of inquiry.

While the basic proformas differ in the sources they draw on, the column headings for each remain the same. It is helpful to provide a visual distinction between proformas/sources; for this purpose, it is

recommended the researcher uses a different font colour for entering text in the basic proformas: e.g. blue for Proforma 1, black for Proforma 2 and green for Proforma 3. Note that each theme will have its own (sub) proforma: for example, data from electronic sources for theme A should be entered in Proforma 1.

Proforma 1: Electronic Sources

As mentioned, Proforma 1 is for recording electronic data. It is recommended that EndNote is integrated into the process to provide a (transportable) referencing system. The process for Proforma 1 involves cutting and pasting text from Portable Document Format documents (PDFs) that allow this function, and other soft electronic files —such as quotes from academically reputable sources—which can later be inserted into other documents such as a thesis, or an article or notes in a power point presentation. Entering text into Proforma 1 in **blue** font will avoid inadvertent plagiarism when the material is later integrated or synthesised into another document.

EndNote software enables the storage and management of bibliographic references to books, journal articles, conference papers and other document types. This software is an invaluable resource with the proposed data capture system outlined here as references that form a person's individual EndNote library can be chosen or selected and inserted automatically as citations into word-processed documents in a preferred referencing style and then used to develop a bibliography or reference list. It has added advantages when library technology enables automatic connection links to EndNote which is a common feature in this era of technological easing.

As the example in Proforma 1 shows, the right-hand column contains the researcher's notation of the major points for that theme. Notations should provide a summary list, set out in such a way that it aids analysis and the subsequent breakdown and categorisation of information in a form that can later be retrieved to investigate hypotheses, theories and trends (whether for a book chapter, an article or a thesis). This is explained in Figure 1 below, headed "Proforma 1".

Figure 1: Proforma 1 – Electronic (Soft Data)

Insert Figure 1 here.

Themes	Author date page author/website date of access	Author date page author/website date of access	Author date page author/website date of access	Summary of important data from theme
A. Introduction	Here is where you mark and use useful phrases from quotes for the introduction	Cut and paste text in blue here and cite i.e. From journal PDFs, web newspaper articles – any electronic source appropriate to the topic	Use Endnote here	In this section, it is recommended that you note the important data retrieved in the columns to the left on a theme-by-theme basis. You then copy and paste all the important data into another document and integrate it with data from the other proformas. This is where the themes begin to merge with chapters or sections within chapters as part of the thesis or report you are preparing for academic or work purposes.
A. Introduction continued	Keep adding lines for each theme where needed.			
B. Free Trade Agreement Definition				
B. Free Trade Agreement Definition continued	Again keep adding lines for each theme where needed			
C. Historical background				
D. Politics at Australian Federal Govt. level				
E. Economics at Australian Federal Govt. level				
F. Top 8 University Council Policy_www.go8.edu.au				
G. Research Methodology				
H. University Funding Positive + and negative - Aspects				
I. Student Funding Positive + and negative - Aspects				
J. Draft Conclusion				
K. New Theme				
L. New Theme				

Table cells for the Researcher to complete as relevant

Another way of explaining this again to make it as clear as possible is to use the following table (see Figure 2) but for the clarity I will use just one theme.

Figure 2: Proforma 2 – Softcopy (File) Simple Example

Insert Figure 2 here.

H. University Funding Positive + and negative - Aspects	We shall call this Box 1 In this box you cut and paste some text that is highly relevant form a particular theorist or source. These could be journal articles, Podcast text from the Australian Broadcasting Commission radio programs, newspaper articles and the list goes on.	Box 2 In this box you place more data from reputable electronic sources of an academic standard	Box 3 The same applies again and you can put added rows in to keep developing more boxes with more information and make sure you use quotation marks	Synthesis Box Imagine you have twenty academic observations on this theme as you have added in more and more boxes in more and more rows. This is the important box. This is where all the information is synthesised drawing the information together that you the researcher consider to be worthy of integrating into your writing as important research outcomes.
H. University Funding Positive + and negative – Aspects Continues	Box 4	Box 5	Box 6	

For each of the proformas, the process of developing hypotheses and theories can be achieved by assembling all the data for that theme in a separate electronic folder in your computer. At this stage, prior to starting research, you should then set up a system of electronic folders, one for each theme. Place each electronic theme file in the relevant electronic theme folder. Each folder will therefore contain (at least) 3 files on that theme, one for each type of source.

Proforma 2: Hard Copy Sources or Scanned Resources

Proforma 2 is for hard copy data where the source is not available in electronic form. However whilst not all students may have ready access to a scanner they may chose to photocopy text from various sources but where possible scanning is preferable and this also enable the use of EndNote of course in this proforma. If a researcher has access to a scanner then this proforma could be seen as obsolete and proforma 1 could be used more comprehensively.

Nevertheless in cases where students may only be able to photocopy material (and there are many students in that circumstance in developing countries for example) I will outline the purposes and function of this second proforma (Figure 3).

For Proforma 2, researchers enter only details of the source they want to be able to refer to: it is not necessary to take notes or to enter notes in the proforma (as shown in Figure 3). Instead, organise some hard copies: photocopy the title page of the book or journal, also the salient pages relating to your theme(s); on the photocopied pages, use a pen to make a double line down the side of the relevant paragraph, add the theme code beside it and, on the same page, record the source by author, title, year and even paragraph number (this will provide a failsafe system of retrieval should any page become detached from its title page). Again, file the electronic file in its relevant folder in your computer; then file the photocopies in hard copy files by theme in your filing cabinet that should be set up having a file for each theme in hard copy form. This can be varied of course and hardcopy documents can be scanned and stored electronically. It is expected readers will base their capture and retrieval system on this model and hopefully customise it and improve its benefits to the time poor researcher who needs to retrieve material with system and ease. Again it is important to integrate EndNote as outlined above.

Figure 3: Proforma 2: Hard Copy Data

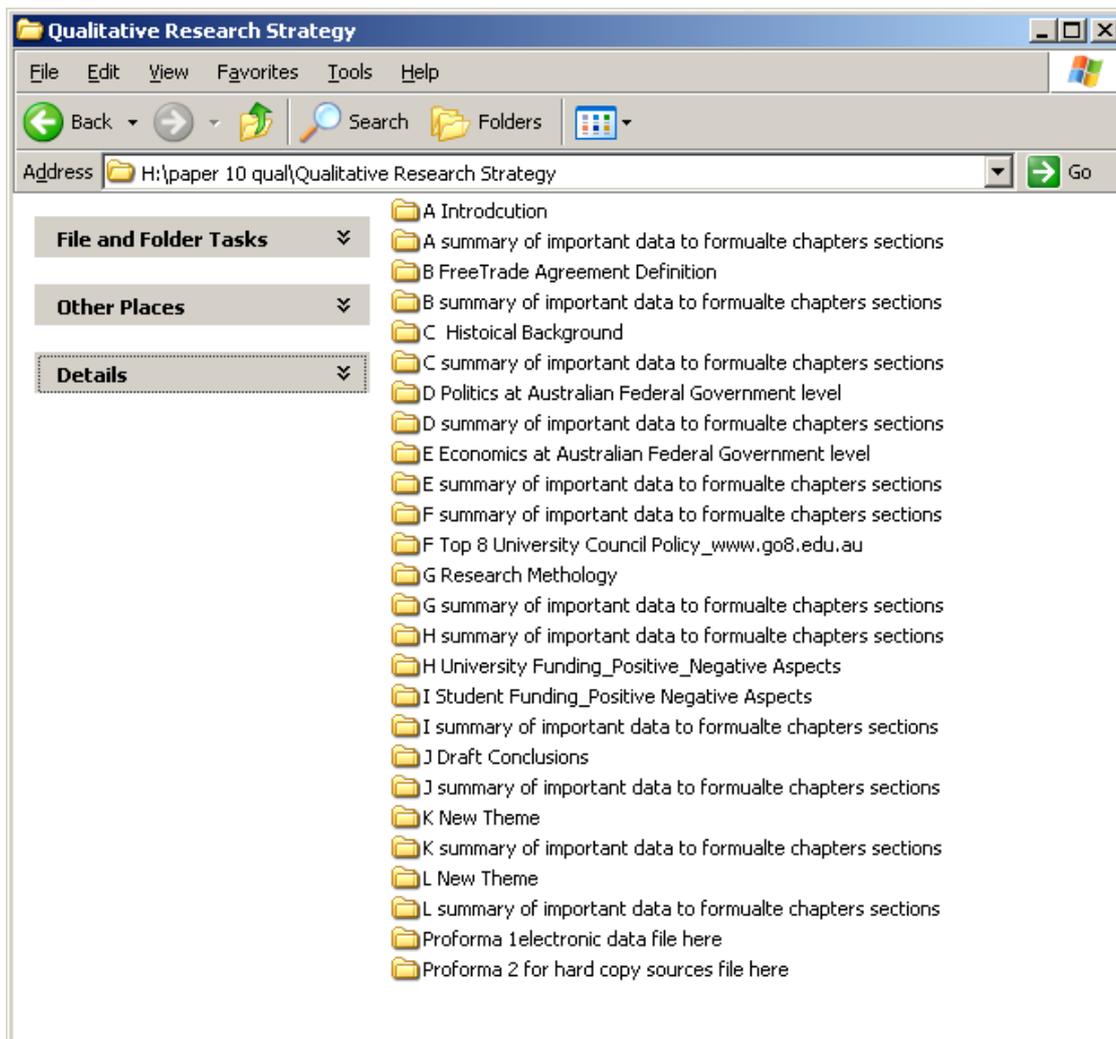| Themes	Author date title page publisher	Author date title page publisher	Author date title page publisher	Author date title page publisher
A. Introduction	Here is where you mark quotes for the introduction. Type text, in black, here and cite i.e. From hard copy sources (text books, radio transcripts, PDFs, newspapers, magazines, journals, Podcasts etc)			
A. Introduction continued	Add lines for this theme where needed.			
B. Free Trade Agreement Definition				
B. Free Trade Agreement Definition continued				
C. Historical background				
D. Politics at Australian Federal Govt. level				
E. Economics at Australian Federal Govt. level				
F. Top 8 University Council Policy_www.go8.edu.au				
G. Research Methodology				
H. University Funding Positive + and negative - Aspects				
I. Student Funding Positive + and negative - Aspects				
J. Draft Conclusion				
K. New Theme				
L. New Theme				

Table cells for the Researcher to complete as relevant

It is important the system of thematic folders is also adhered to in Windows Explorer as shown in Figure

4. In Windows explorer the documents used are stored electronically. The same can apply to scanned

copies of books or journal that are not in electronic form. It is integral to retrieving data and remaining organised.

Figure 4: Organisation of the Thematic Folders in Windows Explorer

Insert Figure 4 here.

Qualitative Research Strategy

File   Edit   View   Favorites   Tools   Help

Back ·   ·   Search   Folders

Address H:\paper 10 qual\Qualitative Research Strategy   Go

File and Folder Tasks ⌄

Other Places ⌄

Details ⌄

A Introdcution
A summary of important data to formualte chapters sections
B FreeTrade Agreement Definition
B summary of important data to formualte chapters sections
C Histoical Background
C summary of important data to formualte chapters sections
D Politics at Australian Federal Government level
D summary of important data to formualte chapters sections
E Economics at Australian Federal Government level
E summary of important data to formualte chapters sections
F summary of important data to formualte chapters sections
F Top 8 University Council Policy_www.go8.edu.au
G Research Methology
G summary of important data to formualte chapters sections
H summary of important data to formualte chapters sections
H University Funding_Positive_Negative Aspects
I Student Funding_Positive Negative Aspects
I summary of important data to formualte chapters sections
J Draft Conclusions
J summary of important data to formualte chapters sections
K New Theme
K summary of important data to formualte chapters sections
L New Theme
L summary of important data to formualte chapters sections
Proforma 1electronic data file here
Proforma 2 for hard copy sources file here

Proforma 3: Other Sources

Aside from electronic and hard copy sources, qualitative researchers are highly likely to gather information from sources such as case study interviews, fieldwork observation, podcasts, public speeches, seminars and discussions with worthy informants in the field. Again, the data is evaluated by theme, as with Proformas 1 and 2; in the same way, the conclusions drawn emanate from evaluating all the data by theme to develop a hypothesis or standpoint to understand the data in greater depth and to use the material

for later purposes, whether for a thesis, promotion or a speech at a conference. To enter data in Proforma 3 (shown in Figure 5), word process brief, summary notes and insert them in the proforma and, if following the suggested colour coding, use **green** font. EndNote is an important feature in this section as well.

Figure 5: Proforma 3: Other Data Sources

Insert Figure 5 here

Themes	Source event Person's name Where when setting Date	Source event Person's name Where when setting Date	Source event Person's name Where when setting Date	Source event Person's name Where when setting Date
A. Introduction	On this proforma, record notes from case study interviews, fieldwork observation, podcasts, public speeches, seminars and discussions with worthy informants in the field.			
A. Introduction continued	Keep adding lines or boxes for each theme where needed.			
B. Free Trade Agreement Definition				
B. Free Trade Agreement Definition continued	Again keep adding lines for each theme where needed			
C. Historical background				
D. Politics at Australian Federal Govt. level				
E. Economics at Australian Federal Govt. level				
F. Top 8 University Council Policy_www.go8.edu.au				
G. Research Methodology				
H. University Funding Positive + and negative - Aspects				
I. Student Funding Positive + and negative - Aspects				
J. Draft Conclusion				
K. New Theme				
L. New Theme				

Table cells for the Researcher to complete as relevant

Figure 6 Proforma 4 – Overall Synthesis

Themes	Summary of important data Combining synthesised data from Proforma 1, 2 and 3.
A. Introduction	This is the important section where you combine the electronic data, hard copy data, and field work/observation data In this section it is recommended to note the really important data retrieved in the columns to the left theme by theme. It is in here that you are writing the sections of your minor thesis or chapters in your PhD exegesis. This is the section where you are assembling the important data that supports the hypotheses. This is where you synthesise and merge the data you consider crucial to your study.
A. Introduction continued	*As above*
B. Free Trade Agreement Definition	An so forth
B. Free Trade Agreement Definition continued	Ditto and the same applies for all of the themes that you develop as your data accrues
C. Historical background	
D. Politics at Australian Federal Govt. level	
E. Economics at Australian Federal Govt. level	
F. Top 8 University Council Policy_www.go8.edu.au	
G. Research Methodology	
H. University Funding Positive + and negative - Aspects	
I. Student Funding Positive + and negative - Aspects	
J. Draft Conclusion	
K. New Theme	
L. New Theme	

Table cells for the Researcher to complete as relevant

The above table is where the research data obtained from multiple sources in the Proformas theoretically and systematically is synthesised in one table and where less compelling data can be jettisoned. This is where the case is built into the themes or sections in the study and it is put together as though it were a series of building blocks and each section has its synthesised coherence – sort of like a melting pot to use a culinary metaphor.

In sum, this system of collecting and categorising information is designed to record preliminary data as well as data that emerges during research. Researchers can, of course, add or delete themes as they decide what is pertinent to their purposes. The amount of time required to undertake effective research is significant and when searching for sources many problems can occur which waste time. In effect this system is best described as 'short-term suffering for long-term fruition'. In other words, time spent at the start of research in setting up electronic files and folders and hard copy files (for photocopied pages and copy sources) in a filing cabinet will save much time in subsequent research, with the potential to continue using this system for vocational purposes in work of any type but particularly research.

The researcher now has an array of themes compiled in three differing ways and trapped on the proformas. For each theme the material gathered from differing sources can be amalgamated enabling the researcher to consider the value of the data and use it as they see fit when organising a thesis, presentation, essay or report of some kind. In other words at some stage the researcher can draw together all the data theme by theme and then amalgamate the data with a heightened understanding and use the material that is of relevant value to the task at hand.

Conclusion

Streamlining the gathering of data and achieving efficiencies in storing and retrieving information are crucial for time-poor adults who wish to use strategic organisation to focus their learning. The system outlined here is not only a way of organising data for later retrieval, it also focuses research and thinking along thematic lines from the inception of research; it thus provides additional clarity on the topic of inquiry, with the aim of getting to the crux of research issues more quickly. While active learning is an increasing part of children's learning, it is manifestly the domain of the adult learner (Knowles 1970, 1990). Retention and comprehension are of critical importance to adult learners but, equally so, in the twenty-first century, as fewer younger employees take the place of older employees, so to is the transfer of this knowledge.

The proposed research system requires a disciplined approach. In my experience, while this discipline is initially time-consuming, it later provides an aid to memory and an expedient resource for saving a diminishing commodity called time in the life of a busy person attempting to balance study with either or all of the pressures that work, family and social commitments induce.

This basic research system aims to assist adult learners and new researchers in streamlining the analysis of content from various sources of information. Its further purpose is to expedite the learning process which inevitably, and sometimes too slowly, accompanies any research process. What is proposed here aims to provide a foundation where lifelong learning is enhanced via an uncomplicated system that provides a framework designed to assist people to progress, as individuals, personally, intellectually, vocationally, and in other "life-Balance" ways. Persons undertaking tertiary study have a responsibility to make the most of the quality of life for people in their society or community as well as 'deserving' organisations. The rate of change is swifter than ever before and the need for ideas, understanding and the transfer of knowledge to address change ethically and intelligently is now.

Learning involves a lasting change in knowledge, behaviour and appreciating the need to continue knowledge development as a sustained process. This article has sought to foster one key learning lesson: the memory can handle so much, but a system that provides for the retrieval of data to assist cognitive and situational development is crucial for those interested in synthesising information that underpins life-long learning and personal development.

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