NVivo courses in the library: Working to create the library services of tomorrow

Best practice article

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Abstract

In 2017, we started a project with the goal of offering a new service to academic staff and PhD candidates at the NTNU University Library. This was courses and guidance in the use of NVivo, a software to alleviate the workload in structuring and analysing qualitative research data. This kind of software is useful for a plethora of subjects, like geography, anthropology, sociology, and art history. Faculty members and PhD candidates at NTNU have expressed enthusiasm about courses in NVivo. We have offered a course from fall 2018.

Our article will focus on how we have identified a new skillset and how we developed a new course for our patrons in close cooperation with them.

Keywords: NVivo, New services, Library Development, CAQDAS

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Introduction

In December 2017, we started a project with the goal of offering a new service to academic staff and PhD candidates: courses and guidance in the use of NVivo at the Norwegian University of Science and Technology (NTNU), NTNU University Library. In their article "The Use of NVivo in the Different Stages of Qualitative Research" (2018), Trigueros-Cervantes, Rivera-García and Rivera-Trigueros argue that: "(…) we do find within it the help that facilitates the process, the detailing of the analysis and the offering of the evidence that will give the investigation a greater quality" (Trigueros-Cervantes, Rivera-García & Rivera-Trigueros, 2018, p. 391). It is our objective that the NVivo services we offer at the university library will be as Trigueros et al. suggest: to help facilitate the research process and heighten the quality of the research. Therefore, this quotation will serve as a point of departure for our article.

In the article, we will first look at what NVivo is, why the library should be offering courses and support for NVivo, and how to start new services. Finally, we offer some thoughts on how the services can, and should, be developed as the library staff evolve their competencies and the needs of our users change.

What is NVivo?

NVivo is a type of CAQDAS, an acronym that stands for computer assisted qualitative data analysis software. It is software that helps alleviate the workload in structuring and analysing qualitative research data. It allows the user to handle large amounts of data in a practical manner. NVivo enables the researcher to save time and energy by doing some structuring tasks automatically. However, we would like to stress that the main benefit of using NVivo is lifting the quality of the analysis, not saving time.

NVivo is a relatively complicated program, which could take some time to master fully. However, in most cases with bigger research projects, that investment will be repaid in form of time saved on coding and analysing, but also in the likely event that the analysis will be more thorough and therefore have higher quality.

NVivo is able to process many types of data: text based (like word documents and pdf's), pictures, audio, video, web pages, social media content, and more. Such software is useful for a plethora of subjects, like geography, anthropology, sociology, medicine and health science, technology, and finance, but also, maybe more surprising, in subjects like art history. Since NVivo is able to handle other kinds of data and lets the user code these as well, it is therefore useful in subjects one might not initially connect with analysing qualitative data.

In short, one could say that NVivo is a tool for handling qualitative research data. What research data could be is up for debate, and there is no clear consensus. In this article, we use the definition of research data in general provided by the Research Council of Norway:

> [research data (in general) is] … the registration/recording/reporting of numerical scores, textual records, images and sounds that are generated by or arise during research projects. These may, for example, be data that are generated through new analysis by combining existing secondary data, or entirely new data that are generated through new data collection. Research data are always a direct result of research activity, regardless of whether the data are based on secondary data or whether they are collected from

scratch. (The Research Council of Norway, 2017)

What then, is *qualitative* research data? Except for numerical scores, qualitative data could be almost any of the data types mentioned above, i.e. anything from more or less structured interviews to images, audio material, videos, textual material, content from social media, and more. NVivo can handle all these data types and thus help the researcher in both managing and analysing the dataset.

In many fields, it may be difficult to keep qualitative data in order, to maintain a systematic overview, to categorise and analyse data, and to visualise research, especially when it comes to big data sets. It is therefore necessary to structure and order data in a way that makes it as easy as possible to navigate and to retrieve relevant passages. The most common way of achieving this in most fields using qualitative data is through coding. The definition of coding we use below stems from Miles and Hubermann (1994), but is still highly relevant:

> *Codes* are tags or labels for assigning units of meaning to the descriptive inferential information compiled during a study. Codes usually are attached to "chunks" of varying size – words, phrases, sentences, or whole paragraphs, connected or unconnected to a specific setting. They can take the form of straightforward category label or a more complex one (e.g., a metaphor). (…) Codes are used to retrieve and organize the chunks mentioned earlier. The organizing part will entail some system for categorizing the various chunks, so the researcher can quickly find, pull out, and cluster the segments relating to a particular research question, hypothesis, construct, or theme. (Miles & Huberman, 1994, pp. 56-57).

It is worth mentioning that the use of CAQDAS is a somewhat controversial topic in some academic fields where the analysing of qualitative data is prolific. It is not only because of the "computer assisted" part, but also because there has been debate about whether coding is appropriate in qualitative analysis at all (Mosberg Iversen 2017, pp. 147-149).

In the chapter "Software and qualitative research" (2003), Weitzman notes the following on misconceptions about data analysis and coding in a CAQDAS:

> As already mentioned, many people apparently continue to believe that QDA [CAQDAS] software intends to *do* the data analysis. Sceptical researchers raise challenges to the notion of "dumping my text into a program and seeing what comes out." Others express this more as a hope that if they buy the right program, they will not have to engage in the often very time-consuming process of analysing all that text themselves. QDA [CAQDAS] software provides tools that help you do these things; it does not do them for you. (Weitzman, 2003, p. 315).

The misconceptions mentioned by Weitzman above some 15 years ago are still part of the discussion today. Some researchers are still sceptical about "dumping their text into the program" and relaying on the programme, while others have a very rosy idea about what computers can and cannot do. Of course, the researcher cannot leave everything to a programme, but the programme helps facilitate the processes, the detailing of the analysis, and the offering of the evidence that will give the investigation greater quality (see Trigueros-Cervantes et al., 2018, p. 391). NVivo's usefulness covers the entire process of qualitative

investigation. A tool like NVivo would probably increase the quality of projects. The programme is useful, regardless of the chosen methods. However, in what ways can CAQDAS' such as NVivo help the researcher structure and code data?

Firstly, it gives one place to store all the data, no matter if it is text, picture, video, or audio files. Then, instead of going through the material with coloured pencils, sticky notes, and a scissor, one can read through, or watch the data on screen and assign codes to useful passages or words. Each code will be colour coded so one can quickly see when browsing the text, video, or picture, which codes have been assigned where. When the researcher is done with a part or maybe the whole set, they can easily see all the, as Miles & Huberman puts it, 'chunks' with a specific code laid after each other (Miles & Hubermann, 1994, pp. 56-57). It is also possible to assign relations and hierarchies between different codes. Another option is to use the map function to visualise the structure of the data and its relations. Another form of visualization available in NVivo is word clouds. Here it is shown which words are most frequently used in the material.

NVivo can also lend a hand in the analysis by auto coding the material. It can search the entire text material for specific words or phrases and apply preassigned codes to the text. However, relaying on this type of coding can be problematic. According to Mosberg Iversen, loss of context is one of the possible dangers with auto coding:

> With CAQDAS-programs it is possible to divide up a material by coding it, as well as creating codes automatically by searching. This creates a worry that the researcher does not interact with the material and the contexts in which it is created in its entirety, but instead dives into select passages that might be retrieved automatically (Roberts & Wilson, 2002). This is a legitimate concern best countered by holding fast to good research practises like reading through the complete empiric material multiple times. (Mosberg Iversen, 2017, pp. 151-152, our translation).

Therefore, while NVivo can be a useful tool for structuring, organizing, and searching through material, it cannot replace the need for a human analyser. The bad news is that the researcher still need to do the work, but NVivo can help do it more efficient and structured, and help raise the quality of the analysis.

How to teach NVivo?

We offer the courses as hands-on workshops. This is partly motivated by our own teaching experience in reference management tools like EndNote, where hands-on courses are essential, and partly motivated by the amount of literature supporting this kind of approach when teaching CAQDAS programs (see for instance Bourque & Bourdon, 2017, Silver & Rivers, 2016). Our experience with EndNote clearly shows the need for user support far beyond only teaching the software in question, because of highly different levels of computer literacy amongst the participants. When it comes to teaching NVivo, we are also confronted with highly individual research designs, type of data material, and different subject areas of the participants, in addition to the before mentioned varying levels of computer literacy.

In our course catalogue (http://www.kurspaamelding.no/ntnu-ub/nvivo), we present the workshop, and it is possible to register online:

NVivo – 2-day introduction for PhD candidates and researchers
NVivo is a software to alleviate the workload in structuring and analysing qualitative research data. In the course, we will give an overview of the software, and show the most used operations and functionalities in the program. The goal for the course is that participants get a basic understanding and can start using the software for their own research projects. The course is aimed at users with little or no experience in using NVivo or similar software.
The course will briefly cover:
· Starting a new project
· Importing text, video/sound, pictures and social media data
· Pros and cons to different methods
· Basic analysis of data
· Presenting your data and analysis
· Q and A

Our course is a two-day course. This differ a bit from the offer from other institutions, where the courses could be two hours instead of two days. The reason why we believe that we need two days is partly the above-mentioned argument regarding computer literacy, and partly our firm belief in the relevance of a hands-on approach. In addition, we need more time because we are happy to include Aksel Tjora, who is professor in sociology at NTNU, with expertise in qualitative research methods, and Lisa Reutter, who is a PhD candidate with years of experience with NVivo in her own projects, in our teaching team. Both give a talk of approximately an hour each.

An example of the use of NVivo which we have prepared for the more technical part of our courses, is built on the State of the Union speeches of the last four American presidents. The speeches are fetched from the website *The American Presidency Project* (Woolley & Peters, 1999-2019). Our example is adapted from a Danish example we were extremely happy to get access to, provided by Daniel Pryn and Erik Schwägermann at Copenhagen University Library, who have several years of experience teaching NVivo.

The American President State of the Union speeches example should be useful both for the noted differences in the speeches themselves, which may be analysed with the help of NVivo, but also because the example could consist of a variety of material types – first and foremost the speeches themselves in text, but also in pictures/video, and audio.

The example could also possibly apply to different subject areas and disciplines depending on different research traditions, perspectives and angles. For instance, a PhD candidate from classical studies could be interested in the rhetorical issues in the speeches, a researcher from art and media studies might like to study the different use of official portraits of the presidents, or the ways they promote themselves through media. A researcher from political science could relate the specific speeches to different political theories and ideas, and a philosopher, for instance a person interested in applied ethics, could take the speeches as a point of departure when discussing specific ethical issues, like intentions versus consequences in political ethics. And so on.

Not least, researchers from different subject areas and disciplines would most likely apply a wide variety of different research methods. Regardless of method, NVivo should be a

useful tool for many researchers. As Trigueros-Cervantes et al. point out,

> … the software is simply a tool put at the disposal of researchers. It doesn't determine or obstruct the paradigm or methodology along with which we move. This decision will always depend on the researcher, based on the ideological, epistemological, ontological and methodological position. (Trigueros-Cervantes et al., 2017, p. 382)

Even if they are most interested in investigating the use of NVivo and ATLAS.ti in research projects based on methodology of grounded theory, Niedbalski and Ślęzak (2017) in a similar way as Trigueros-Cervantes et al. regard both programs as supportive in every scientific field, and that they may have highly practical application whenever qualitative data is used. (Niedbalski & Ślęzak, 2017, p. 93).

As NVivo is obviously a tool for a wide range of disciplines, it makes the library the ideal hub for expertise in this field, furthering the longstanding ideal among librarians to work in close cooperation with their researchers.

New library services

The university library provides research support in a range of fields these days, by giving courses and individual tutorials, and by providing useful websites for researchers and other staff. In addition to our course in NVivo we also teach and support complicated searches in different databases and other sources, we give courses and individual tutorials in reference management tools like EndNote, Zotero and BibTex, we teach how to accomplish open publishing, how to manage research data, and how to deal with copyright issues.

One could ask, why NVivo and not some other software? Other commercial software that offers a comparable toolbox is available: ATLAS.ti and MAXqda are perhaps the most famous of these. Open source alternatives also exist: Casandre, Aquad and others. Most important is perhaps not exactly which software to choose of the available programs, but to make sure that the researcher pays attention to the advantages and shortcomings it may contain and make a description of the use of the program.

In their article "The discourse of QDAS [CAQDAS]: reporting practices of ATLAS.ti and NVivo users with implications for best practices" (2017), Paulus, Woods, Atkins and Macklin point out that even if QDAS [CAQDAS] software have been used for at least 25 years by researchers all around the world, there have been few studies showing how they use and experience them (Paulus et al., 2017, p. 35). In their article, they aim to 'investigate how researchers have used QDAS [CAQDAS] programs to support their work, and to … investigate how researchers report their use of QDAS [CAQDAS]' (Paulus et al., 2017, p. 36). The most important finding showed that researchers with a deliberate approach to the use of such tools usually explain in detail how they use their chosen tool, and that this is of great importance:

> Justifications for QDAS [CAQDAS] use often included such claims of improved quality; e.g. that it is an improvement over manual analysis, is better able to handle large datasets, improves the rigor of the study, or enhances the trustworthiness by providing a transparent audit trail. However, claiming that the use of QDAS [CAQDAS] automatically improves study quality is misleading. Without a detailed explanation of how researchers used QDAS [CAQDAS] to improve study quality, such claims

perpetuate misconceptions of who has control over the study – QDAS [CAQDAS] or the researcher (Paulus et al., 2017, p. 42).

Paulus et al. even suggest that journals should incorporate a thorough description of the use of QDAS [CAQDAS] into their guidelines for publication: "As illustrated in our findings, it is possible to provide careful and rich descriptions of QDAS [CAQDAS] use in relatively few paragraphs" (Paulus et al., 2017, p. 44).

Also, Trigueros-Cervantes et al. make it plain that under no circumstances do CAQDAS programs attempt to substitute the researcher. In other words, the researcher must be attentive when using tools like for instance NVivo:

The software is simply a tool put at the disposal of researchers, and the uses and risks that may exist around the use of information technology in qualitative research do not originate from the nature of the program itself, rather from the attitudes of the researchers (Trigueros-Cervantes et al., 2017, p. 391).

Our reason for focusing on NVivo at NTNU (at least for the time being), is bureaucratic and utilitarian rather than driven by any strong opinion regarding which CAQDAS software is best: Our host institution has a site-license for NVivo, and therefore NVivo was the software we "chose" to develop services based on.

The truly ambitious and computer savvy librarian or researcher could also pick and choose different software to fit different purposes, developing custom made scripts to support research. However, this would require a significant investment on the part of the library in raising the skill level of the relevant librarians, an investment that might be well worth it, but could come at a later stage. As mentioned earlier, we discovered an interest and a relevance for CAQDAS programmes like NVivo in many different fields.

Currently there are few competent users of any CAQDAS software at our institution (NTNU), meaning that the library can likely shape an emerging need and situate our services in such a way as to make us attractive as a partner for researchers.

In addition, being subject librarians who are supposed to give support to researchers, possessing research competence and EndNote teaching skills ourselves, and NVivo being a programme with the possibility of importing references and PDFs from EndNote amongst other reference managers, we found that the library was the right place of offering NVivo. Of course, if needed, with technical support from the IT department at our university: Now that the course offering is well under way, we are increasingly looking to develop collaborative efforts with the IT department. As a library, we can offer courses and user support. However, when the researchers get into technical problems (which some of them most likely would do from time to time), we would need additional support from our IT department. What shape this cooperation will take is still up for debate, but there can be no question that a much closer relationship between IT and the library is needed in this area.

Our reasons for choosing NVivo then where the fact that it is available "off the shelf" (i.e. it requires little specialized expertise to get the program running) and its institutional availability, in addition to our teaching expertise in other, similar tools (i.e. reference management tools). Not least, NVivo is a (more or less) complete solution: most of the research process (from data collection, via coding and analysis and finally visualising and exporting)

can be done in the same program, using the same workspace.

We have identified PhD candidates and faculty as our primary target group. One could argue that courses in NVivo would be very useful for master students in many subjects, provided that the library has resources to follow through on such a potentially big commitment. Based on the organisation of different institutions, it may not always be the library which will be best suited to provide these kinds of services.

Some universities, like the University of Oslo, have a group in their IT department who provides courses and guidance in use of software. NTNU does not have such a group, so for us it was obvious that the library, with experience from giving classes and guidance in EndNote, and providing other research support services took the lead. As librarians, we are used to handling qualitative data and we have experience in literature review and metadata management. At NTNU, the library has taken charge of handling open research data at our institution.

Our involvement in NVivo started when Magnus happened to attend a two-day workshop in NVivo, he got a distinct notion that this was something the library should offer as a new service. He did a quick demo of the software for the rest of our department (the library section for humanities, education and social sciences) in 2017, and Hege and Sara became involved. Sara had already heard from some of the teacher educators that they had tried NVivo and had not quite gotten the hang of it.

In addition, we discovered that some of the academic staff at the Department of Teacher Education and the Department of Sociology and Political Science had started holding some courses and giving guidance to their immediate colleagues and PhD candidates. When we approached two of them, Ela Sjølie, associate professor, and Aksel Tjora, and asked what they thought about the library stepping in and offering courses and guidance, they were very happy to let us pick up the torch and carry it onwards. Nonetheless, we, on our part, we did not want to let their knowledge go to waste, so we have been working with them to create a service that could most effectively meet the needs of our users. We also received invaluable help and guidance from Pål Fugelli, PhD and senior engineer at the university centre for information technology at University of Oslo, and Daniel Pryn and Erik Schwägermann, information specialists and subject librarians for respectively economics and social sciences at Copenhagen University Library. None of this would have been possible without their patient advice and their online course offerings, which makes this a perfect example of the fact that collaboration is key when it comes to creating new services.

New skills and competences

Finally, we are reaching the core of the matter: if you want your library to evolve, you have to keep your fingers on the pulse of your institution and know what your patrons need almost before they do so themselves. Is there any new way that the library can utilise our unique skillsets to further the overall goals of the institution, and, in this case, aid in lifting the quality of research and teaching? Like when we started providing courses and guidance in EndNote, we believe that we have found something important to offer with NVivo. Our initial probing has shown that there is already a need for this kind of service. However, the amount for researchers who already know about NVivo and what they can get out of it pales, from what

we can see, to the amount of people who does not know how helpful this software can prove in their projects. Therefore, in addition to providing the service, there will also be a need for active marketing inside the organisation to spread the word and knowledge about the software itself.

However, how do you know what kind of new services to create, how to update the ones you already offer, and how can you spread the word about them? In later years, research support has been a priority for us, and we have found that the way we have organised our services really helps facilitate all the above. At our library, each subject has an assigned librarian, who usually have a master's degree or a PhD in that specific subject or in a related field, and it is his or her job to get to know the researchers, know what they are working on, and find out what they need from us to elevate their research. If you have a personal relationship with them, it is easier to know what they need before they even do so themselves. You know the persons to go to with questions and the ones who might be interested in collaboration and you know which channels to use to get the word out about a new service. Because, even if we have set up channels for communication, like our subject blogs, the most effective way of making new services known to most researchers is usually through an informal chat with their favourite subject librarian who can pitch it to them tailored to their professional and personal needs. Therefore, our recommendation is to get up close and personal with the researchers. Get into their staff meetings or have lunch with them. This will make your job much easier, and their work better and more efficient.

In our experience, there is also a professional and personal benefit to develop new services. You will learn new skills, have good odds to develop a popular and highly relevant new service, and collaborate with people both inside and outside of your library, department and maybe even outside of your own organisation. Then, when you have something to share, you can spread the word. If you are doing something new, you can tell the rest of the library world. Write about it, talk about it, or make a podcast or a video about it. Nevertheless, it does require that your employer recognise the importance of developing new services in tune with our new high-tech world and the need to devote resources in order to let their librarians develop new skills, stay up to date and grow as professionals and as humans. Our opinion is that this is an investment well worth making.

We have now expanded our group of three to a teaching team with individuals with backgrounds from different subjects. It has taken a lot of time to get to a level of mastering NVivo where we can now hold courses for others without wasting everyone's time and embarrass ourselves.

We have so far offered two courses in fall 2018, and three during spring 2019. The courses are standalone library courses, with important contributions from the mentioned sociology professor and the research fellow. The courses are available for all PhD candidates and researchers at NTNU, either in Norwegian or in English. Our course has received interest from outside NTNU as well, and in February 2019 we even held a two-day course at the UiT – The Arctic University of Norway in Tromsø.

In collaborating with the ones responsible for courses given to PhD candidates in the future, we hope to offer our courses at the most opportune time in their project and in a context that makes sense. Using NVivo requires a basic understanding of qualitative scientific methods so hitching our courses to the method specific ones is a good way to make sure that knowledge is fresh and that the participants are most likely to see the connections between method and

tool. We also hope to be able to have the instructor from the scientific methods course present to answer those types of questions. In this way, the library can insert itself into credit awarding courses and sprinkle some librarian magic on it.

In their article "The CAQDAS Postgraduate Learning Model: an interplay between methodological awareness, analytic adeptness and technological proficiency" (Silver & Rivers, 2016), Silver and Rivers stress the importance of integrated learning of qualitative methodology and technology for postgraduate students. Their findings highly support our initial understanding of the importance of co-operating with staff offering the methodology courses at NTNU. As they point out, "many postgraduate students either do not know how to undertake analysis in line with their methodological and theoretical framework, or are insufficiently conversant with the software to do it" (Silver & Rivers, 2016, p. 599). Their CAQDAS learning model is built up of several steps, and it is a model which may be highly useful for our own teaching: The steps consist of initial awareness (pre-training), where the participants decide that they are ready to learn, and use CAQDAS, followed by guided use (in-training):

> For many, unexpected possibilities, such as being able to use software to undertake a literature review, reflect theoretical frameworks, make linkages between data and literature and plan and structure the final thesis, heighten enthusiasm and confirm the usefulness of the software for their needs. … Guided exploration and experimentation characteristic of both the workshop-based learning and individual coaching experienced by this student cohort, contributed to increasing knowledge about, and skills with operating, software functions at the time of the training/coaching and immediately afterwards (Silver & Rivers, 2016, p. 600).

The last step in the model described by Silver and Rivers is independent use of CAQDAS (post-training). Silver and Rivers call attention to several challenges the postgraduate students meet after having participated in guided use, some of those caused by the students feeling overwhelmed by the complexity of the tool, uncertainty about the functioning of tools, lack of methodological awareness and analytical adeptness, unclearness about qualitative methodology: "The result is often unsuccessful independent use which is attributed to inaccurately perceived software inadequacies" (Silver & Rivers, 2016, p. 604). The conclusion is not surprising, stressing the importance of integrated learning of methodology and technology:

> Current postgraduate students will form a significant section of the next generation of researchers and we have a responsibility to ensure they are adequately prepared. The relative lack of integrated teaching of CAQDAS in methods curricula represents a failure … (Silver & Rivers, 2016, p. 605).

As argued by Silver and Rivers, the best method is to integrate NVivo in established courses on qualitative methods. However, some of the doctoral candidates at our institution might already have been through a course in methodology, and some of the more established researchers might be interested in learning NVivo as well. As mentioned, our standalone courses are open to everyone, both established researchers and PhD candidates. These will make up a more diverse group, both in academic level and experience. Not least, they will have their background from different subject areas. It might therefore be more of a challenge to

compose a course that will suit everyone's needs in the best possible way. When it comes to open courses, we would need to be even more aware of challenges originating from (possible lack of) knowledge about the preferred methods and the CAQDAS technology, and the participants' attentiveness towards the relations between the two. In any event, post-training follow-up will be essential. This should be embraced as an opportunity to further engage our users (a dynamic we have seen several times in our EndNote teaching). The NVivo course should be seen as a first/initial meeting, and we as a library should be fully prepared to follow this up at the users' request. So far, we have provided a joint email address for questions and answers (nvivo (at) ub.ntnu.no), we offer post-course individual tutorials, and we are going to provide a physical post-course meeting place for participants once a month. Different users will have different needs, and the library needs to be flexible. This is especially true when developing new services.

Hands-on workshops and post-training follow-ups would also be in accordance with recommendations from other teachers and writers. In the article "Multidisciplinary graduate training in social research methodology and computer-assisted qualitative data analysis: a hands-on/hands-off course design", Bourque and Bourdon describe their experience and argue for the effectiveness and usefulness of dual hands-on and hands-off dynamic approaches (Bourque & Bourdon, 2017). As other approaches, it has its strengths and limitations.

Future development

Looking ahead, we will most likely need to expand our offerings of services related to NVivo and similar computer software. We ask all the participants at our courses to fill out an evaluation form. We can use this feedback to adapt our courses from day to day, but we also use it when we do bigger revisions of our courses. As mentioned, NVivo aims to offer a total package, allowing the researcher to both structure, search and analyse research data. Still, there are numerous gaps in the research process that need to be filled: How should the researcher deal with data formats not supported by NVivo (i.e. issues of converting various data format)? How should the researcher deal with limitations in the software (NCapture's lack of full video downloads, Twitter and their limiting API etc.)? Another issue is the plurality of computing platforms: while Windows has been dominant among our users, Mac is increasingly popular both among faculty and PhD candidates. NVivo is available for both platforms, but with some differences. These challenges must all be addressed. One relatively simple solution is directing Mac/Linux users to use NVivo on the University Remote Desktop server, which provide them with a full Windows desktop remotely. Still, this means that library staff must be prepared to understand and guide users in how to use these services. There is also an increasing demand for long-term data management, especially from funding institutions like the Research Council of Norway or the EU. These issues must all be addressed by any library hoping to support researchers in their work.

The solution, from a library perspective, lies in building staff competency. Researchers in the social sciences and humanities are increasingly aware of both the wealth of data being created by the digital revolution and their own need to find and use tools to analyse these data. With a busy schedule, they are looking outside their own departments for help with these issues. It is our hope that the library is the place to find that expertise.

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