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The Artisan's Tools.
Critical Issues When Teaching and Learning CAQDAS

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Abstract: Nowadays we have a wide variety of computer-assisted qualitative data analysis software, CAQDAS, to choose from, and almost every qualitative researcher uses one or two of these programs to analyse his/her data. This *demand* for CAQDAS has brought not only more sophistication in the newest programs and updates but also the discussion about its methodological implications and the need for more training courses and workshops. A lot has been written about the relation between CAQDAS and qualitative methodology. Nevertheless, the ways the training courses and workshops have been developed and carried out have not been outlined. Who are these courses planned for? Is there any prerequisite that the attendants must fulfil? What must the main goal of these training courses be? This article discusses some facts I have found in my experience as a social researcher and CAQDAS user and trainer in a country where this kind of software is not widespread. The article also focuses on some of the problems that arise when training people in the use of CAQDAS and the consequences the *globalisation* of training courses and workshops focused on the acquisition of mechanical code-and-retrieve skills have for qualitative methodology. Finally, I propose some critical issues that CAQDAS trainers and qualitative researchers should bear in mind when teaching or learning the use of any qualitative data analysis software.

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> Computers make good friends. No matter how stupid, dull or dumb we may feel, we can still feel smarter than our computer. Computers can do many things, but they cannot think—and we can. Unfortunately, that also means the thinking is up to us. A computer can help us to analyse our data, but it cannot analyse our data. This is not a pedantic distinction: we must do the analysis.
>
> Ian DEY, 1993

1. Introduction

Computer Assisted Qualitative Data Analysis Software, CAQDAS, are very common among qualitative researchers nowadays. The first programmes were created in the 60s, but it was in the 80s and early 90s when they began to be widely recognised in the field of qualitative analysis. Today the use of software to assist qualitative analysts is a must, and there is a wide range of programmes to choose from, each one including specific tools for the handling and storage of different qualitative data. Some of them can work only with text, others can handle images, sound and video; some build hierarchical trees of categories, others let the researcher build their own "trees", and others simply list the categories alphabetically. Most of them can create reports according to the analyst's needs; some can be used as a first step in the analysis of data, and the results can be exported to other programmes for further analysis. Although the tools the programmes offer have revolutionised the way of doing qualitative analysis, there are still qualitative researchers who systematise their data manually in a reliable way. [1]

Together with the increase of the use of these programmes, many workshops to train researchers in the use of them have been developed. Some workshops are led by universities and research centres, and others are provided by private enterprises. Some are offered to small groups of researchers, others are offered to anyone who wants to learn to use these programmes. But most of them are one-day or two-day training workshops, which guarantee participants that they will acquire the adequate skills to use a specific software in their own qualitative projects. [2]

The most well known programmes are the *code-based theory-builders* (MILES & WIETZMAN, 1995), and most of the workshops offer training in the use of one of these programmes. I have trained some qualitative researchers interested in knowing CAQDAS, and some quantitative researchers who simply wanted to know the way a text analysis software works, but kept on using SPSS. Although software to assist qualitative data analysis is almost unknown in Colombia (or perhaps because of it), my brief experience as CAQDAS user and trainer has made me wonder: Are we on the right track offering one-day or two-day training workshops? And, even more important, are we on the right track when separating

the workshops from the academic discussion about the methodological implications that the use of CAQDAS brings? I do not have all the possible answers to these questions, but my particular experience shows some ways to re-think most of the current training workshops. [3]

2. Training Workshops: Between *Neophilia* and Usefulness

2.1 The demand for training workshops

The use of CAQDAS is rapidly growing among qualitative researchers. This has implied the creation of many workshops round the world to train people in the use of the software. Some programme developers travel widely to lead one-day or two-day workshops, which are now highly appreciated in many countries, such as the United States, the United Kingdom, and Australia. These workshops are open to anyone who wants to be trained in the use of a programme; being a qualitative researcher is no prerequisite. [4]

The demand for workshops is focused on two programmes: Atlas.ti and NUD.IST. I think that this is due to two main reasons: (1) these are the most well known programmes world-wide; and (2) most of the novice qualitative researchers who want to use a CAQDAS ask more experienced researchers for the "best" programme, and most of the time they are referred to Atlas.ti and NUD.IST. [5]

This phenomenon has been strongly criticised. Not because of the programmes themselves, but because they are based on the Grounded Theory Methodology. COFFEY, HOLBROOK and ATKINSON (1996) say that the wide spread use of software developed around Grounded Theory, would lead us to the homogenisation of all the qualitative analysis processes; i.e. we all would become grounded theorists. [6]

LONKILA (1995) suggests that the fact is that some aspects of Grounded Theory have been overemphasised, especially the process of coding. In other words, some of the qualitative researchers are using Grounded Theory because the software they use is based on this methodology. The advantages and disadvantages that this may bring have been long discussed (see also LEE & FIELDING, 1996). My own experience has shown me that that is causing prejudicial effects in the qualitative research field, something that I had already mentioned in a previous article (CARVAJAL, 2001). But there is another fact to bear in mind: some qualitative researchers use CAQDAS because these programmes are fashionable. [7]

I have found that some researchers prefer Atlas.ti or NUD.IST based on aspects like the user-friendliness and the interface, instead of the fact that the programmes are useful to their methodology. Once a qualitative researcher asked me about the "best" programme of all (this is the first question CAQDAS users ask); I told her that there was no "best" programme, but that based on the data and methodology of her research, I could suggest her one. After some interchange of emails, she decided to buy NUD.IST Vivo because it was the latest version

available in the market, and because its interface was more attractive. It is not that a programme must not have an attractive interface; but the decision to use one or the other must be made from the basis of the methodology the researcher is going to use. Buying a CAQDAS is like buying a tie: you will look for a tie that matches the suit you are going to wear. [8]

2.2 What people believe and expect from CAQDAS

As I said before, in Colombia the software to assist qualitative analysis is almost unknown; because of this, most of the people I have trained had no previous knowledge about CAQDAS. When I asked what they expected from this software, the answer was very simple: "to use the programme to *analyse* our data". This is the first misunderstanding about CAQDAS that trainers must fight. No programme can analyse data. They can help the analyst to organise the documents, categorise them and facilitate the processes of searching documents and categories. But the process of interpreting and building results from the categories and the relations among them is up to us. *We* must *do* the analysis (DEY, 1993). [9]

The possibility of reducing the time of analysis by using a programme is also one of the expectations that novice CAQDAS users have. If we compare the process of computer-assisted analysis to the traditional cut and paste, the amount of time will be significantly reduced. But the time of analysis depends not only on the fact of using a CAQDAS or not, but also on the amount of data that is going to be analysed, the type of analysis the researcher is going to do and the expertise of the researcher in the use of the software. Novice users, especially those who have no background in qualitative research and methods, must realise that qualitative analyses imply longer time than quantitative analyses do. Using a CAQDAS is not like inputting data in a spreadsheet and pressing OK to obtain results. It implies a long process of reading, segmenting and categorising the data. And, finally, if the researcher wants, he/she can also search among his/her documents and categories, formulate hypothesis and test them just before building his/her conclusions. [10]

A last expectation novice users have is related to the results of the research. Novice users are interested in the way the programme can help them to write the final report of their research. That is, how the outputs can be integrated into the final report. The outputs (results of searches, reports on categories, diagrams, etc.) have different formats, depending on the software used. Most of the programmes generate outputs that can be exported as ASCII or ANSI files (text-only documents), and then can be edited using a word processor. No qualitative programme generates outputs that can be directly included as a part of the report of a research. Once again, it is the researcher who has to write his/her conclusions in the final report. [11]

These expectations, understandable in the context of researchers that have no previous knowledge of CAQDAS, represent a *quantitative* approach to the use of

computers in qualitative analysis. Some researchers expect the programme to analyse their data in the same way some quantitative programmes like SPSS do. [12]

2.3 Characteristics of current training workshops: more tools than reflection

Through the mailing list *QUAL-Software*, created by the CAQDAS Networking Project, I regularly receive information about CAQDAS workshops led by universities, the CAQDAS Networking Project itself, and private enterprises. I will refer here only to the workshops that were planned to be held between September 2001 and April 2002. Ironically, I will use a quantitative approach to show the frequency of the main characteristics of these workshops. [13]

There were 44 planned CAQDAS workshops, divided as follows: fourteen on NUD.IST Vivo; nine on Atlas.ti; eight on NUD.IST 5; four on NUD.IST 4, as well as on Decision Explorer and winMAX, and one on The Ethnograph. 29 out of 44 workshops were one-day sessions; 14 were two-day sessions, and one was a three-day session. The last one was a special case because it followed a two-day course on Handling Qualitative Data. 43 out of 44 workshops were introductory ones. There was only a one-day workshop for advanced users. All of the 44 workshops were hands-on, and in seven of them, participants were invited to bring their own data. Only three workshops specified the maximum number of participants (5, 10 and 20 respectively). [14]

In addition to the CAQDAS workshops, there were a few other courses on CAQDAS related topics, such as a two-day course on Computer Assisted Qualitative Data Analysis, with practical demonstrations of up to five packages and hands-on workshops on at least three packages. There was also a two-day course on Handling Qualitative Data followed by a three-day workshop on a programme, and a five-day retreat on the Focus Group method, which included the use of software. [15]

Apparently the workshops were open to anyone who was interested in the use of a programme to assist qualitative analysis. Only 3 out of 44 workshops and courses required the fulfilment of some prerequisites. It was prerequisite to have a basic understanding of qualitative methodology to attend a workshop on NUD.IST 4. It was prerequisite to be a researcher or postgraduate student, and to have a basic understanding of qualitative data analysis, to attend an introductory workshop on NUD.IST Vivo. And it was prerequisite to be a full-time or part-time worker on research projects, a social science academic, research officer, or postgraduate research student to attend a two-day course on Computer Assisted Qualitative Data Analysis. [16]

This very simple categorisation of the characteristics of current CAQDAS workshops allowed me conclude: (1) most of the workshops are one-day sessions; (2) it is not prerequisite to be a qualitative researcher, nor to have previous knowledge of qualitative research and methods to attend a workshop; (3) although all the workshops are hands-on, only few of them allow participants

to work with their own data; and (4) almost all of the workshops are intended to train participants in the use of the basic tools of a programme, but a few of them intend to show the participants the relation between qualitative methodology and CAQDAS. [17]

These workshops could lead to a misleading use of the programmes as tools to assist qualitative analysis and, in consequence, the undertaking of qualitative research projects in which the qualitative methodology has been replaced or imposed by the software. This is not a joke. It can really happen; and what is worse, it happens. [18]

2.4 "What is the next step?" When coding rules

Now I would like to talk about my own experience with a specific workshop, which illustrates the problems that can arise when novice users face CAQDAS. One of the first workshops I ran was in the use of NUD.IST 4, and it was directed to a group of about eight young researchers. They were interested in using a CAQDAS to *analyse* an enormous amount of field notes they had already made. They wanted a one-day workshop to acquire the basic tools to use NUD.IST 4. [19]

After telling them that the programme could not do the analysis for them, I began by the origins of NUD.IST and told them that although its design was based on Grounded Theory, it could be used with any methodology. At this point, they interrupted me and asked me about Grounded Theory, which they did not know. In that moment I stopped and brought up the basics of Grounded Theory, and then continued the workshop as planned. At the end, I told them to email or telephone me in the future if they needed further help in the use of NUD.IST. I should not have done so. [20]

Some days after the workshop they called me because they were not sure about how to code. Besides, they wanted more information about the coding process used in Grounded Theory, because they considered that it was the methodology they were going to use, instead of the one they proposed when they designed their research project. Some time later they called me again to tell me what they had done up to that time and then asked me: "what is the next step?" I met them and noticed that they had based all their analysis on the process of coding. I tried to make them realise that maybe that was not the way analysis should be done, but they were just focused on the deadline of their research. What kind of final report did they write? I do not know. What validity does that research have? I do not know either. [21]

This experience exemplifies what COFFEY, HOLBROOK and ATKINSON warned us in 1996: the homogenisation of all the ways of doing qualitative analysis due to the use of CAQDAS. Those young researchers believed that because NUD.IST was designed based on Grounded Theory, that methodology was the one they had to use, because it suited the programme. It also exemplifies one of the consequences one-day workshops bring: these novice CAQDAS users believed that the use of a programme was going to strengthen and validate the

conclusions of their research. Instead of this, the use *they made* of the programme invalidates their conclusions because they forced their methodology to fit the programme's design. They were not critical of the program. They were dazzled by what I call *neophilia*: a blind trust in what technology brings, taking it for granted, without discussion. [22]

3. Alternatives When Teaching and Learning CAQDAS

Bernardo TURNBULL (2001), referring to his own experience, once said:

> "running [a CAQDAS] without training was much like sneaking into an artisan's workshop and learning about the art and trade by looking at her tools. [...] I have said more than once that teaching the use of a software to someone who could not do the job by hand is dangerous." [23]

His experience showed me that I was not alone in this *crusade*: CAQDAS workshops should not be limited to learning the use of the software's tools. So I wondered, what else must a CAQDAS workshop include? More than the use of the software (anyone who has the user's guide can learn how to use it), the workshops must include basic elements to develop critical thinking in the participants, before the programmes. [24]

I designed a one-semester workshop-seminar, titled Herramientas informáticas para el análisis cualitativo (*Computer Tools for Qualitative Data Analysis*), and proposed it to the Department of Psychology at the Universidad de los Andes. It was accepted and I lectured its first version during the second semester of 2001 to last year Psychology undergraduate students[1]. I want to present here some critical issues raised from this experience, issues that I believe show us new ways to train qualitative researchers in the use of programmes to assist qualitative analysis. [25]

3.1 Giving more information than developing skills

WEITZMAN and MILES (1995) designed a worksheet with four key questions to guide researchers to choose the right software. The questions are (p.9): (1) What kind of computer user am I? (2) Am I choosing for one project or the next few years? (3) What kind of project(s) and database(s) will I be working on? (4) What kind of analysis am I planning to do? I consider these four questions to be currently valid, though they were formulated in 1995. Here I want to paraphrase the first question. [26]

Most of current CAQDAS workshops (it does not matter which programme), are focused on the *use* of the programme; i.e., the main goal is that participants acquire the basic skills in the use of a software. As seen above, all the workshops announced on mailing lists refer to one-day or two-day workshops. Basically, what most trainers do in workshops is to show participants how to import

1 A second version will be lectured in the second semester of 2002, focused on four of the most used qualitative methods, and the use of one qualitative programme to assist them.

documents into the software, how to create codes or categories (although KELLE, 1996, differentiates codes from categories), how to code, how to create and/or test hypothesis and how to make reports. I myself began by doing so in the first workshops I ran. Paraphrasing WEITZMAN and MILES (1996), what kind of CAQDAS users are we training? I wondered. [27]

To use a CAQDAS is more than knowing how to import documents, code them and make reports. It is not only to fit the software to the methodology the researcher is using or vice versa, as shown in the related case. It is also to know how our methodology relates to the tools the software has. I have known researchers who believe that the more tools they use the more complete their analysis is. And other researchers who believe that because the programme does not have the tools they need, it means that their research has exceeded the programme's capacities. Both of these are misconceptions of what the tools and the programmes are for. [28]

The students that registered for my seminar were particularly interested in the use of CAQDAS to *analyse* the data of their undergraduate thesis. But after our first session they were disenchanted: I told them that only in the sixth session we were going to use software. The first five sessions were focused on the introduction to the seminar, the history of CAQDAS, their main characteristics, the process of coding in qualitative research, and the relation between theory-building software and Grounded Theory. This last topic was included to prevent students believing that Grounded Theory *is* the right methodology to be used when working with CAQDAS. [29]

After these seminar sessions, we went into the workshop sessions. I trained my students in the use of EZ-Text, winMAX 99, NUD.IST 4, and Atlas.ti 4.2. I had planned to work with HyperRESEARCH too, but we did not have enough time. By the end of the semester we returned to the seminar sessions to discuss the use of the programmes and the relation between software and qualitative methods. Each of my students was using a particular methodology in his/her thesis, so we could share our points of view about the way each one was going to use the chosen software. [30]

In the last session they told me that they had finally understood why the first five sessions were more *theoretical* than they expected. It is worth saying that all the students who attended my seminar had previously taken a seminar on Qualitative Research, but had no previous knowledge on CAQDAS. [31]

I have stated that CAQDAS workshops are open to everyone who wants to use a programme of this kind; it is not a prerequisite to be a qualitative researcher or to have a background on qualitative methodology. Must CAQDAS be limited to be used only by qualitative researchers? I do not think that is the solution. I believe that CAQDAS workshops *must* include training in qualitative methods if the participants do not have previous knowledge of it. But if participants do, it is worth highlighting that the software is nothing but a tool. A tool that researchers can use in several ways, according to their methodology and needs. Researchers must

not limit their analysis to the tools that the software has nor be obliged to use all the tools, either. [32]

3.2 Promoting *critical* thinking instead of *mechanical* thinking

How many of CAQDAS trainers are CAQDAS critics? Most of them defend the advantages CAQDAS brings; but how many of them present on their workshops the disadvantages these programmes bring? To know a software is to know about the methodological implications its use has for qualitative methodology. There are lots of papers, articles and even books about this topic. But how much of this literature is included as basic bibliography in the workshops? I know that some workshops led by universities world-wide promote the discussion about the relationship between CAQDAS use and qualitative methodology. But most of workshops do not. I think that there is an economical factor for this: one-day or two-day workshops are income producing. To include more information in the workshops would imply more than two or three sessions, and it would increase the cost for participants, which would also have a bearing on the number of them. But if we are to do things, we are to do them right. [33]

It is not up to the participants who attend a CAQDAS workshop to discover the disadvantages that the use of a specific programme could bring to his/her analysis process. We must warn novice CAQDAS users about the consequences *neophilia* brings and include readings about the relation between qualitative research and the use of CAQDAS, about the criticisms the use of CAQDAS in qualitative research have received, and about research projects assisted with a programme. In addition to the hands-on workshops the readings can bring participants the opportunity to create their own criterion of CAQDAS. [34]

The discussion about the methodological implications that the use of CAQDAS brings to qualitative methodology has been limited to academics. It has become an almost theoretical topic not included in CAQDAS workshops. But I believe that every CAQDAS user has something to say about this, if he/she is given the chance[2]. Every month there are lots of new researchers trained in the use of a programme to assist qualitative analysis. Even the way all these researchers are using programmes is a researchable field. The academic discussion has to be taken out to the public, and researchers of every kind must be included on it. The creation of a specific "discussion group" about this topic (be it real or virtual) would be a great idea[3]. [35]

This aspect (developing critical thinking) is related to what I presented in Section 3.1. The more information we include in the workshops, the more critical participants will be. The lack of information and the *neophilia* are the two elements that would lead us to weak qualitative analyses, giving weight to those who believe that to introduce computers in qualitative research is counter-

2 FIELDING and LEE (1998) carried out a project asking users what they were doing.

3 Mailing lists such as QUAL-Software are focused on the diffusion of the programmes and only from time to time some list members question the methodological aspects regarding the use of the software.

productive. It is also possible that some of the trained researchers begin to be critical before CAQDAS when using a programme on their own research. That was my case. Nonetheless, I think that by introducing aspects like some programme's weaknesses and the way they organise and systematise the data, participants will not fall in *neophilia* and will be careful when using a programme to analyse their data. [36]

3.3 When "Bring your own data" means "Analyse your own data"

As we could see in Section 2.3, only 7 out of the 44 mentioned CAQDAS workshops invited participants to bring their own data. I know it is impossible to work individually with every participant on his/her own data. It is better to offer personal advice to researchers. Besides, for academic purposes, it is easier to give the participants in a workshop the same documents to do exercises with a programme: we will always know what segments of the document (be it text, images, sound or video) the participants are working with. But is it not a workshop's goal that participants know how to analyse their own data? Of course; but they will only work on their data when returning to their research projects. And the work of trainers ends when the workshops end; and by experience I have learned that giving your telephone number for further questions is not a good idea at all. [37]

My experience with the seminar in the Universidad de los Andes showed me that only when participants begin to analyse their own data, can really understand the way the software works and how to use it according to their methodology. I used my own material to train my students, although they began to analyse their own thesis material by the mid-semester. From that moment the questions they had about the use of the software increased a hundred percent. By the end of the semester they suggested to me to allow them to use their own data from the beginning: "it was easier for me to use the programme when analysing my interviews, because I knew what my research question was, and what I was looking for in the answers of my interviewees", one of them said, and the others agreed. [38]

I believe that once the participants have been trained in the basic tools of a programme, it is time to allow them to experience the programme by themselves. By doing so, they will find the best way to segment and code their data, and how codes and categories can be organised. Trainers must not only guide participants in the appropriate use of the software according to the methodology participants are using, but they also have to confront them with the decisions they have to make in the process of analysis. [39]

Of course, this is only possible if the workshops are not limited to one or two days. This process of accompanying novice CAQDAS users implies a long time course. I think that this process is only possible in academic environments (undergraduate and postgraduate research students), or with full-time and part-time researchers really interested in the use of a programme to assist their analysis. But people interested only in the *mechanical* operation of the software

can be trained in one session. I myself was trained in a three-hour session on NUD.IST 4, the first programme to assist qualitative analysis I knew; nonetheless, only when analysing my own data did I found that there was something missing in the programme and its relation to qualitative methodology. [40]

3.4 The wide panorama: there is no "best" programme

CAQDAS workshops are planned to train in the use of only one programme. Only one of the above mentioned workshops was intended to show participants more than one programme (the course on Computer Assisted Qualitative Data Analysis), but it was not precisely a training workshop. I believe that when training people who do not have previous knowledge of any software to assist qualitative analysis, we must show them that there is not only one programme. We must tell them about the wide variety of software available and the different functions they have. I know that training in the full use of a programme would imply a very long process; but by giving participants the basic tools of various programmes, and by allowing them to experience the software with their own data, they would select the appropriate programme according to the tools it has and the type of analysis the participants are going to do. I have already related the case of the researcher who wanted to buy the "best" programme. She trained herself with the demo version of NUD.IST Vivo, and decided that that was the best programme, but did not try other software. [41]

As shown in Section 2.3 most of CAQDAS workshops are on Atlas.ti, NUD.IST versions Vivo, 4 and 5, and a smaller number on winMAX and The Ethnograph. But there are many other programmes: AQUAD, CoAn, Code-A-Text, Diction, DIMAP, HyperRESEARCH, KEDS, TEXTPACK, TexSmart, and BEST, among others. It is not that someone interested in the use of a CAQDAS *must* be trained in all of this software, but if trainers show participants the wide variety of existing programmes and their main characteristics and functions, participants will have *real* elements to choose the software that better fits their needs. [42]

In my seminar I trained my students in the use of the basic tools of four programmes, with the possibility of using the complete version of three of them. This, combined with discussions about the methodology they were going to use on their thesis, gave us the opportunity to choose the most adequate software for their particular needs. In the end, all of the participants chose the same software although their methodologies were very different. To decide what software to use, they took into account two factors: the user-friendliness and the flexibility. They told me that they did not want a programme that was very rigid in the organisation of the categories and material; they preferred a programme that would allow them to *play* with the categories and to create their own relations among all the elements of their research. "Flexibility; that's the clue", they concluded. [43]

4. Closing Note[4]

Computer-assisted qualitative data analysis software has become a basic tool for qualitative researchers; a tool to aid them in their process of analysis. Cutting with scissors and pasting with glue, our traditional way of systematising our data, is now seen as archaic work. However, we cannot forget that that way of systematising was widely used by every qualitative researcher round the world until a decade ago; even today some researchers still use index cards and cabinets to organise their data. And it works. [44]

What are the advantages of using software to assist qualitative analysis, then? These programmes facilitate the processes of segmenting, categorising, annotating, retrieving, and searching within and across documents and categories. All of this can be done in a fast way, and the original documents are not fragmented. Researchers can find what they want just by doing the right selection, and the PCs can store lots of documents that otherwise required big cabinets and folders. The programmes by themselves are neither good nor bad for qualitative research. It is the way that qualitative researchers use them that influences qualitative methodology. Even so, in some cases, programmes have replaced the method. And it is a real fact that some programmes, especially those based on Grounded Theory, include new tools that were not used before in qualitative methods. These new tools imply new ways of doing qualitative analysis (KELLE, 1996), but are not intended to be a method by themselves. [45]

Every qualitative researcher who uses CAQDAS is responsible if the programme replaces the method. Over all, this is a responsibility of every researcher who trains in the use of CAQDAS. We cannot believe that these programmes are the panacea in qualitative analysis just because they are widely used today. In Colombia the use of this software is still limited to small groups of researchers. I believe this is the reason why it was easy for me to notice that the workshops focused on the use of the software would raise methodological implications for qualitative research. [46]

Based on my experience, I have presented four critical issues that I believe qualitative researchers must bear in mind when training or being trained in the use of CAQDAS: giving more information, promoting critical thinking, the possibility of analysing participant's own data, and knowing the wide variety of programmes. These issues would prevent a misuse of CAQDAS and would strengthen qualitative research methods. The programmes are the tools and we are the artisans. It is up to us how we use them. [47]

4 Once this article was finished I received information about two articles that discusses this topic: MANGABEIRA, LEE and FIELDING (2001) and FIELDING and LEE (2002), of which conclusions I do not reference here. The first article, specially, is about two studies the authors did with CAQDAS users and their expectations. Their findings in the United Kingdom are very similar to the ones I found in Colombia.

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