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Introduction to Qualitative Data Analysis and Coding with QualCoder

Alexios Brailas[1]
Panteion University, Athens, Greece

Elena Tragou
Hellenic Open University, Patras, Greece

Konstantinos Papachristopoulos
Athens School of Fine Arts, Greece

ABSTRACT
This article demonstrates the process of coding textual data, using QualCoder, a free and open-source software tool for supporting the qualitative data analysis process. The aim is to introduce novice qualitative researchers and undergraduate students of qualitative methods to the process of open coding in a clear and concise way. The systematic coding of the empirical data is a crucial first step in many popular qualitative methods like Thematic Analysis or Interpretative Phenomenological Analysis. The initial coding phase is a prerequisite for analyzing and making sense of the data. By using QualCoder, the researcher utilizes a dependable, efficient, and easily accessible tool to work with coding without losing transparency, rigor, and depth in the process. The article concludes by discussing the multiple benefits of using such a tool for the coding process, as well as limitations and potential risks, and thus highlighting the multi-purpose pairing between technology and qualitative research.

KEYWORDS: coding, open-source, QualCoder, thematic analysis.

Over the last three decades, Computer-Assisted Qualitative Data Analysis Software (CAQDAS) has been widely used in qualitative research across many disciplines, including social sciences, humanities, business, and the Arts (Banner & Albarran, 2009; Cope, 2014; Woods et al., 2016). In addition, numerous articles discussing the methodological foundations behind CAQDAS-based qualitative research have been published (Carcary, 2011; Chandra & Shang, 2017; Sinkovics & Alfoldi, 2012). Moreover, during the past decade, scientists and researchers witnessed the rapid growth of the open-source software tools used to conduct research and/or support the overall research process. A characteristic example is the R programming language widely utilized in quantitative as well as qualitative research projects (Chandra & Shang, 2017). CAQDAS tools are becoming an increasingly integral component of most qualitative studies and qualitative researchers are being highly encouraged to use such tools in order to strengthen the quality of their work (Brandão & Costa, 2020; Niedbalski & Ślęzak, 2022). Along those lines, the aim of this paper is to show the reader how to utilize a user-friendly and open-source qualitative research tool, specifically *QualCoder* (Curtain, 2023), demonstrating the multiple benefits of such a tool in the coding process and thus highlighting the multi-purpose pairing between technology and qualitative research.

[1] Corresponding Author: Department of Psychology, Panteion University, Athens, Greece.
E-Mail: abrailas@panteion.gr

Scholars have called for qualitative researchers to demonstrate transparency and reliability within the data analysis process (Kapiszewski & Karcher, 2021; O'Kane et al., 2021; Pratt et al., 2020). Transparency can be defined as "the degree of detail and disclosure about the specific steps, decisions, and judgment calls made during a scientific study" (Aguinis et al., 2018, p. 83), and trustworthiness, the central concept by which to judge the quality of interpretive qualitative research (Evers, 2018). However, the CAQDAS literature does not provide readers with a wide range of specific CAQDAS techniques or a common language to succinctly express how researchers have conducted data analysis—both of which are key to communicating transparency and creating reliability (O'Kane et al., 2021) and in this vein, we argue that the more we elaborate in open-source tools the more we can test new avenues for reliability and validity.

It is important to add here that the value of QualCoder as a research tool lies in its use within the context it is placed. It is not the aim of this paper to speak about QualCoder as a software tool in general. Rather, this effort focuses on the usefulness of QualCoder in the coding process of data for qualitative researchers, both novices and advanced. As QualCoder facilitates the coding process, by making it easier and more user-friendly, it is beneficial for researchers dealing with large chunks of data when trying to make sense of it, organize it, categorize it, and create patterns within and/or between data categories. As Rampin and Rampin (2021) point out, open-source qualitative data analysis suites fill "a specific research need for qualitative researchers who cannot afford access to the software to do their work… There have been fewer than twenty open-source CAQDAS packages available ever, and fewer than five are being currently maintained" (p. 1).

Moreover, the recently developing culture of open science in social science research has enriched the way that researchers and especially qualitative research professionals exchange ideas, brainstorm about their research practices and collaborate on works in progress, data, publications, etc. As the open science mentalité becomes more vibrant around the world among professionals (Hagger, 2022; Woelfle et al., 2011) different open-source software tools, such as QualCoder, have been developing, assisting in the dissemination of the accessibility of research among interested parties, the sharing of knowledge and the development of collaborative research networks (Vicente-Saez & Martinez-Fuentes, 2018). QualCoder, as a research tool, contextualized in the culture of open-source software, can further assist in the embodied practices of coding, production, dissemination, and distribution of knowledge from a research-based-point-of view (FOSTER Consortium, 2018).

The idea of this study sprouted in the land of academic teaching. The main concern of the authors was how to efficiently introduce university students and novice qualitative researchers to the practice of qualitative analysis with the aid of an appropriate software tool. For that purpose, this paper is organized into four main sections, unfolding: (a) an overview of four basic stages in qualitative research, (b) highlighting the importance and explaining the coding process, (c) the usefulness of incorporating QualCoder software in the research process, and (d) the advantages and disadvantages of such doing.

Qualitative research involves roughly four basic stages. The first stage refers to the overall planning and designing of the research project, that is, determining the research questions, deciding the sampling strategy, getting access to the field, and ensuring ethical conduct (Crabtree & Miller, 2023; Willig, 2013). The second stage involves the production (or collection in quantitative terms) of the empirical data (Mason, 2017) by means of systematic observation, such as interviewing, journal keeping, reflecting, focus grouping, etc. Raw empirical data are usually represented as text (audio and video transcripts, field notes, collected documents, etc.) or as images (videos, digital artifacts, etc.) (Brailas, 2020). However, the collection of empirical data in textual format is still privileged in the field, meaning, qualitative researchers often conduct semi-structured interviews to explore and capture the personal lived experiences of the participants. The third stage involves coding, analyzing, and making sense

of the data (Brailas, 2014; Crabtree & Miller, 2023). And the fourth stage refers to the writing up of the research, communicating the results to the scientific community and the general public. For the purposes of this paper, we focus on the third stage and, more specifically, on the coding process, which is usually the first step in the qualitative data analysis journey.

There are a plethora of standardized methods and techniques that have been developed and used for analyzing qualitative data, which often entails a procedure where the raw textual data—such as the transcriptions of semi-structured interviews—are organized and coded in higher-order descriptive or conceptual categories. The process of moving from the level of the raw empirical data to an abstract representation of them is very useful in the research process despite the inevitable loss of information. The representation of the data is never the data per se. We may better understand this statement with a metaphor from everyday life. We all know the importance and value of maps. A map helps people navigate through an area and understand its morphology while providing valuable overall information about the landscape of that area. However, as Korzybski (1958) pointed out, a map is not the territory. A map, despite its utility, does not contain all the details that exist on the territory that it is supposed to represent. The full experience of the territory can be obtained only by walking on it and by allowing oneself to saturate one's senses in the aroma, the height, the ground structure, or the architecture of that territory. But even in this case, no matter how much time one may spend walking in the area – counting trees, buildings, roads, sidewalks, traffic lights, the people that live in the area, and so on—it is impossible to have an overall sense of the shape and the morphology of the territory unless they look at the corresponding map. That is, while the map of a territory does not contain all the vivid richness of the actual territory, it, nevertheless, provides extremely valuable information at a different level of understanding: That of the grand scheme. Therefore, an abstract representation of data allows for new understandings to emerge, not evident at the level of concrete data.

Qualitative researchers look for a systematic way to move from the level of the raw empirical data to that of their abstract representation, knowing that during this process, some details are lost while new insights are gained. By doing that, qualitative researchers attempt to spot recurring patterns, point out connections between concepts, identify emerging themes, etc. As Chenail (2012a) noted, by conceptualizing coding as a process of creating maps for the vast empirical data, qualitative data analysis can be understood "as a form of knowledge management" where the researcher "transforms data into information, information into knowledge and knowledge into wisdom, maintaining the scientific rigor and the artistic aplomb to produce a systematic and creative product" (p.248).

In this article, we demonstrate the process of coding textual data using QualCoder software. Our aim is to introduce novice qualitative researchers and undergraduate students of qualitative methods to the process of coding in a clear and concise way. For a more thorough discussion of coding as a decision-making process addressing critical questions—like what to code, how many codes to develop, what types of coding sets to use, etc.—see the related article by Elliot (2018). Initial coding of the raw empirical data is a fundamental step in many standardized qualitative methods, such as thematic analysis, interpretative phenomenological analysis, discourse analysis, and many others (Brailas, 2014; Braun & Clarke, 2006; Morgan & Nica, 2020; Souto-Manning, 2014). QualCoder is a recently developed free and open-source software application compatible with all major operating systems (Curtain, 2023). Also, it provides an easy-to-use interface without requiring a learning curve for a researcher to utilize it. Therefore, it is ideal for all researchers and especially novices. However, as an introductory software in its initial phase of development, QualCoder does not provide (yet) the full array of utilities and features usually available in commercial quality data analysis software packages. Nevertheless, it provides all the basic functionality needed for coding qualitative data like interviews or focus group transcripts and performing basic qualitative data analysis.

Data Analysis and the Coding Process

Thematic analysis is an introductory and popular method for analyzing textual qualitative research data. In thematic analysis the researcher identifies key concepts and meanings in the data and assigns labels or codes to these concepts through a systematic coding process. The codes are then grouped into broader themes or categories that capture the meaning of the data. Thematic Analysis is particularly useful for exploring complex, subjective phenomena and understanding how individuals interpret and make sense of their experiences. Nevertheless, coding is usually the first step researchers take in the process of qualitative data analysis, not only in thematic analysis but in many other methods. As a nearly ubiquitous practice in qualitative research, coding forms a fundamental aspect of the analytical process. Through coding, researchers can break down their data to produce novel insights and new understandings (Elliott, 2018).

As already mentioned, the coding process mirrors the systematic way of the researcher's journey from the level of raw empirical data (like interview transcripts, observational notes, narrative accounts, etc.) to the level of their abstract representation. This is achieved by identifying and tagging data segments using meaningful labels. A code is a tag we attach to a data segment, whether that segment is a word, a sentence, a paragraph, or a bigger quotation. Code names should be concise and indicative of the data attempted to represent. Each code corresponds to a unit of meaning, a recurring pattern, or anything the researcher begins to recognize in the data as an independent unit of analysis. In this context, a unit refers to a fundamental entity that serves as the focus of analysis, and allows researchers to identify and articulate the qualities and characteristics that they identify and perceive within that element (Chenail, 2012b). Alternative terms used are *categories*, *topics*, or *themes*. A theme refers to a significant aspect of the data that pertains to the research question and reflects a certain degree of patterned response or meaning within the dataset (Braun & Clarke, 2006).

All these terms are used interchangeably to describe the same thing: Something in the data that makes sense for the researcher to be identified as a unit of analysis. However, usually, the terms category and theme are used at a higher level of analysis to describe a group of codes that are somehow linked or interrelated. That is, the first round of analysis involves creating codes (first-order categories), while subsequent revisits of the coded corpus involve grouping codes into categories or themes (higher level of analysis). Acquiring the skill to systematically analyze qualitative data and identify recurring patterns of meaning, group them into categories, and cluster them into broader themes is something considered essential for all qualitative researchers (Willig, 2013).

Two fundamental approaches to the coding process can be recognized. The first approach is deductive and involves coding the empirical data by utilizing a pre-defined, or theory-driven, coding scheme. The second approach is inductive and entails creating codes in vivo by recognizing meaningful patterns in data. The latter is also referred to as *open coding* to highlight the dynamic nature of the process as the researcher constantly creates (opens) codes every time they revisit the data segments and check out if and how they relate to the research question (Corr & Davidson, 2023; Mason, 2017). It is quite common, at the beginning of the process, for a researcher to have difficulty recognizing discrete analytical units in the data and to constantly have to open new codes for every new piece of information. This usually results in coding almost everything using a new code each time. Gradually, as a researcher gains an understanding of the data, the codes become more concise representations of the data segments.

Moreover, the data analysis process quite often entails both deductive and inductive coding: Some codes are theory-driven while others emerge as the researcher stays curiously open in creating connections among the data bits. During data analysis, qualitative researchers systematically identify individual units of research importance, describe the qualitative distinctions that are relevant, and consider how these coded pieces of information are

interconnected in a meaningful way with regard to the research question. This reflective process enables researchers to make informed conclusions about what they have learned from the data (Chenail, 2012a).

At this point, we need to return to the basic question we posed earlier: What actually constitutes a coding unit? As already noted, a code can be a word, a sentence, a paragraph, or any other data unit. Quite often, novice qualitative researchers feel stressed about what should or should not be coded and how to identify suitable patterns of meaning to be coded in their raw data. These questions seem to be of particular concern to them when asked to conduct qualitative research, produce and analyze empirical data, and write a research report. As we discussed earlier, what actually constitutes a coding unit is a key question that many researchers and theorists of qualitative methods have tried to answer (Elliott, 2018; Fereday & Muir-Cochrane, 2006; Issari & Pourkos, 2015; Willig, 2013). For practical reasons, in this paper, two types of coding are identified: First, a researcher can code descriptions of phenomena—like descriptions of situations, events, feelings, and experiences—anything one recognizes as such in the data; And second, a researcher can code interpretations and/or patterns of interpretations as they appear to emerge from the data. In other words, researchers may use descriptive or interpretive/conceptual codes.

We read and reread the data as many times as we need to get acquainted with it while we review and re-review all the emergent codes. In an open coding approach, we do not follow a predefined and rigid coding scheme (Braun & Clarke, 2006; Thompson, 2022); we may need to remove codes, let new codes emerge, and/or add or modify codes as we acquire better theoretical sensitivity (a term used to express precisely the gradually increasing ability of the researcher to perceive several qualities of the empirical data of his research) of our body of data (Nathaniel, 2022). The data is our "star" (Carney et al., 1997), and one of our jobs, as qualitative researchers, is to pay attention to the various relationships we identify and unearth between the different pieces of data during the analysis process.

At this point in the process, the need to use the right software to support quality analysis will most probably stand out. We need to decide which is the right software for ensuring quality in data analysis. At this phase of data analysis, a researcher needs to have a practical tool to help him/her open new codes, assign them to different parts of the data, merge codes, and/or add codes.

Most importantly, during this part of the research, qualitative researchers need to be able to see all the codes that have been created at any time during research, along with the assigned brief descriptions of what each code represents. It is also very important that researchers need to have access to all the sections that have been coded with a specific code across the body of data. In other words, researchers must be able to move easily, directly, and efficiently from the level of raw empirical data to the level of codes (as already noted, a higher level of data representation) and vice versa.

In doing so, qualitative researchers can (a) understand whether they use codes consistently, that is, coding the same kind of semantic content throughout the entire spectrum of empirical data, and (b) understand the code types used in different datasets, i.e., the codes used in one interview vs. another, or those used in coding the interviews of male vs. female interviewees. The possibility of an easy and direct transition from one level of empirical data to another is extremely critical in any research project. Then, as is often happening in qualitative research, once the researcher has reached a final set of codes, a second or even a third researcher can be called in to codify the empirical data again and, in doing so, ensure the "objectivity" of the whole process.

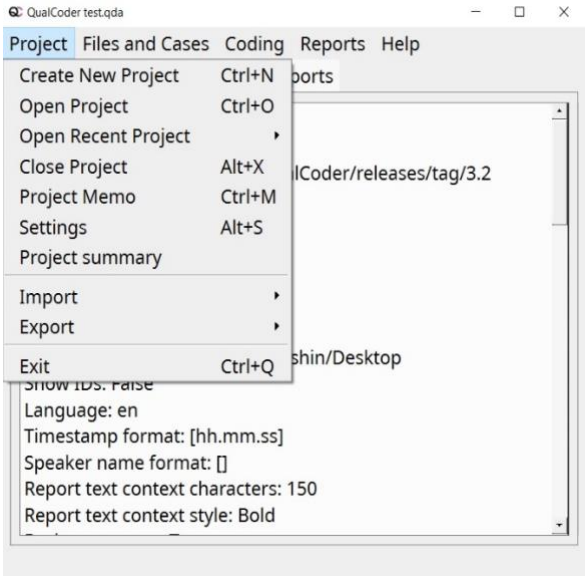
An Example of Coding Textual Data with QualCoder Open-Source Software Case and Methodology

As mentioned, the systematic coding of the empirical data is a critical part of many qualitative research methods and approaches. To that end, the use of CAQDAS software, like QualCoder, allows researchers to maintain a detailed research journal and project log that document their progress efficiently and make their work available for auditing purposes (Brandão & Costa, 2020), making the data analysis process more trustworthy and transparent. Qualcoder is a free, open-source program available for Linux, macOS, and Windows platforms (Curtain, 2023). More specifically, QualCoder is being developed and provided by Colin Curtain under an MIT open-source license (https://github.com/ccbogel/QualCoder/blob/master/LICENSE.txt). As a typical qualitative data-analysis support software suite, QualCoder is designed to help researchers manage and code large amounts of data while also providing tools to help them identify patterns and themes within the data. The latest stable release (ver. 3.2) can be downloaded from GitHub: https://github.com/ccbogel/QualCoder/releases. QualCoder runs as a local application on the user's computer. The developers maintain a dedicated blog with support information, manuals, and tutorials at: https://qualcoder.wordpress.com. In this section, we will provide an introductory example of coding textual data with QualCoder.

After downloading and running the application, the first step is to create a new project by clicking “Project” and then “Create New Project” in the sub-menu as shown in Figure 1. At this point, we need to provide a project name and select a local folder for saving.

Figure 1

The Project Creation Window

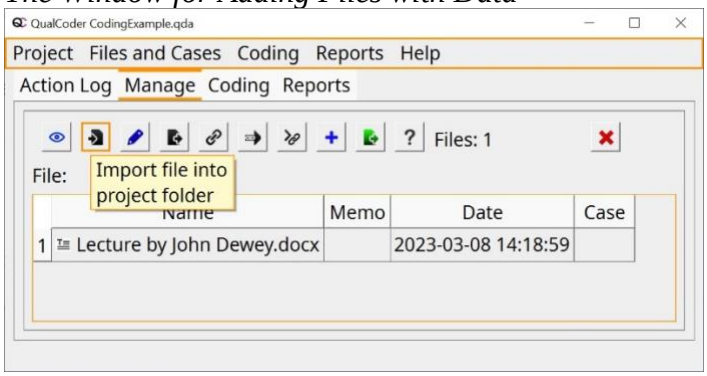


After creating the project holder, we can add one by one our research items (for example the files containing the transcriptions of the interviews in our study). We can import a file into the project by clicking on “Files and Cases” and then selecting “Manage Files” in the submenu, as shown in Figure 2. Qualcoder supports a variety of data formats, including text, audio, and video.

To begin coding the actual data, we select a source file and then we have to click on the “Coding” tab. This will bring up the main program window (Figure 3) where we can create new codes or select existing codes to apply them to specific text segment. We can also add notes and memos to the codes and the respective coded segments. We can select any part of the text and then “drug and drop” any code from the code list on it.

Figure 2

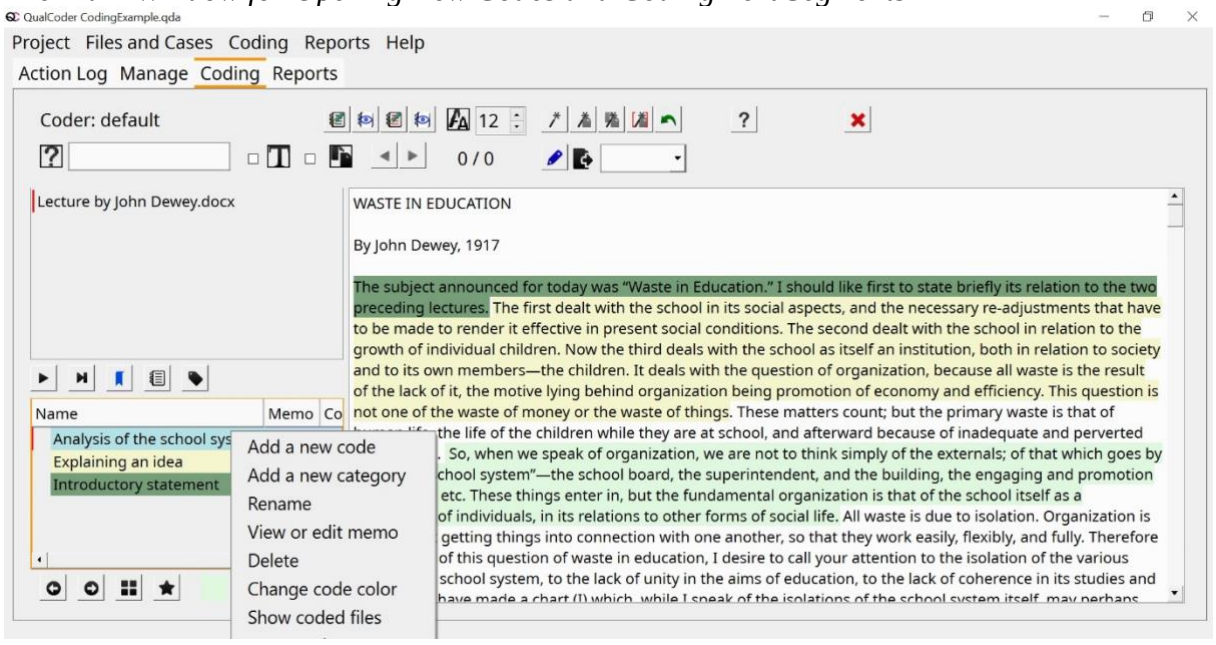
The Window for Adding Files with Data



Once we have coded all our data files, we can use Qualcoder tools to help us analyze and explore our findings. For example, we can generate reports that show the frequency and distribution of our codes in the data files, or we can create visualizations that help us identify patterns and themes in our data. The set of codes can be easily rearranged by merging or splitting existing codes. By clicking on a specific code (from the list of codes we have created), we can bring together all the text excerpts we have coded with it in the entire body of data. Also, if any of these text excerpts were coded with more than one code, all the codes tagged up to that point would be displayed. In that way, we can visit and revisit our data bits without losing track of the coding history at any point in time. Keeping the researcher in relationship with data is, as we all know, an integral part of the qualitative analysis and discussion process.

Figure 3

The Main Window for Opening New Codes and Coding Text Segments



Discussion

Without a doubt, technological developments have enabled new forms of data coding to be incorporated into qualitative work. Qualitative researchers, novice or experienced, need to be able to enjoy an open and "flowing" relationship with their coding process; that is, to be able to visit and revisit their tags, change codes if they cease to represent the data bits, create new ones if the need arises and so forth. This courting process with the body of data is very

important for the researcher because it lays the ground for the analysis process. And the more informative, fun-like, easy-to-use, and manageable the courting process is, the more time the researcher has to dive into their coding system without feeling tired or afraid to try again if the coding system does not represent appropriately the reality of the interviewees/the data.

The CAQDAS tools, including QualCoder and many other, have been saving valuable time for the researchers to immerse in the coding system instead of spending limitless time doing it manually and, more so, be able to manage extended bodies of data without losing themselves in trying to figure out how to do it manually. QualCoder can not only provide a sufficient tool for all researchers to sort out their data but can help them do so in a creative and informative way without having to spend weeks or months doing so and without losing the essence of the emerging reality of the data, which is the core of qualitative research. By having more quality time in their hands and by utilizing a tech tool that makes it easy for the researchers to stay in touch with their data, they free themselves up to play with categories, reflect on the data chunks, alter or get rid of unmeaningful tags, and, thus, delve into their data in a multi-level creative, systematic and dynamic way looking for how the patterns of data make meaningful connections no matter their size, their quantity, or range (O'Kane, 2020).

In other words, QualCoder's layout makes it very easy to learn and use not only for its bookkeeping purposes of the research but also in helping the researcher develop an awareness of the connecting patterns of the data bits, which in turn make up the bulk of the research data. The main challenge in qualitative research lies in the process of transforming numerous pages of field notes into a rigorous, reliable, and transparent final report that effectively communicates the research results (Chandra & Sang, 2019). QualCoder, as a CAQDAS dependable tool, can help researchers in the process of organizing and identifying patterns and concepts in their data without undermining their creativity, diligence, and attention to detail. Nevertheless, it is still the responsibility of the human researcher to interpret the data, create and apply codes, and display the results with the support of the CAQDAS software (Chandra & Sang, 2019). In other words, the researcher's input is mandatory for the meaningful coding of the body of textual data, while QualCoder provides its complimentary housekeeping mechanism.

With the already noted ease of retrieving coded material, researchers with the help of QualCoder can share their work with other colleagues as well as work collaboratively in the same project. QualCoder allows adding extra coders to the same project, which makes the collaboration process much more time- and space-efficient, and trustworthy.

Nevertheless, while there are many advantages to using qualitative data analysis software such as QualCoder in qualitative research, there are also some disadvantages and potential risks to consider. First of all, popular commercial qualitative data analysis software can be expensive and may not be affordable for researchers with limited funding or for independent researchers (however, this is not the case with QualCoder which is an open-source project and therefore always free of charges). Also, a sophisticated research software requires some basic technical skills and having enough time to familiarize with the interface in order to use it effectively, which may limit access for researchers who are not comfortable enough with technology or do not have much available time. Another potential risk is that some researchers may become overly reliant on the software features assuming falsely that it is the tool per se that reassures the integrity and the quality of the overall process. As a consequence, these researchers may not develop enough of their own analytical and critical skills and instead rely on the specific research tool affordances to guide their inquiry. As André (2020) points out, "if QDA software is used for the analysis of qualitative data, there is a fundamental risk that the direction of analysis of the researchers is merely within the shape and cut of the corset of QDA programs" (p. 46). Such reliance on software can lead to oversimplified and mechanical coding, which may interfere with the interpretative process and limit the artistic, creative, and complex meaning-making aspects of qualitative research (Brailas & Sotiropoulou, 2023; DeHart, 2022; Guthrie, 2020). As André (2020) continues, researchers are at risk of not developing "neither

their own paths of analytical organization and penetration of the data, nor paths that are independent of the programs. To put it pointedly: Researchers no longer think for themselves or outside the functional scope of the software" (p. 47). Another critical issue is reassuring data privacy and anonymity. Storing qualitative data on a computer or online platform may pose a risk to the confidentiality and privacy of research participants' information (Akram & Perveen, 2021; Hesse et al., 2019). Therefore, it is critical for researchers to be mindful of potential risks and take the appropriate steps to mitigate them.

Notwithstanding these limitations, with QualCoder researchers can maintain the efficiency and transparency of the coding system, deeper exploration, and refinement of the coded data, and help ensure the consistency of the coding system either by working alone or in research groups. According to Rampin and Rampin (2021), there are four currently maintained (meaning there are active groups of software engineers that update and/or further develop their codes) CAQDASS software packages, which are: Taguette, QualCoder, qcoder, and qdap. However, the two of them (qcoder and qdap) are based on the R programming language, thus requiring a level of advanced technical knowledge by the end users. QualCoder and Taguette, on the other hand, do not require any programming or other advanced technical knowledge to install them and start using them.

QualCoder is (currently) a desktop-only application, therefore, limiting the ability for a group of researchers to work concurrently on the same research project. On the other hand, Taguette can be easily installed and run on a cloud web server allowing different collaborators to have access and work on the same research project simultaneously and from a distance. However, QualCoder seems to have a more sophisticated interface, offering more functions and utilities, like handling audio and video (Curtain, 2023). Nevertheless, the existence and maintenance of many alternative open-source CAQDAS applications is critical for the development of a thriving open research ecosystem in qualitative research and providing scholars with different tools to meet their special research needs, which lacks in comparison to quantitative research approaches (Love et al., 2019; Navarro & Foxcroft, 2018; Stander & Dalla Valle, 2017).

Concluding Remarks

It may be challenging, to say the least, for researchers to think that computer-assisted strategies can manage their data. Some of us may not be as adept with computer technology, may not know how to use such software and/or may have no inclination to learn new computer skills, even if, as this article suggests, CAQDAS technology makes our research projects more efficient and easier to handle. It is not the aim of this paper to persuade qualitative researchers to change the way they have been doing research, but we strongly suggest that they consider the idea of experimenting with QualCoder, especially those of us who work in academic environments and deal with inspiring researchers-to-be who are using software technologies with the same ease that we used to fill out entire rooms with post its, cut data chunks with scissors to form categories and use a variety of highlighters to make our coding system workable.

As shown, by using QualCoder, the researcher utilizes a dependable, efficient, and easily accessible tool to work with coding the data or recoding the coded data without losing transparency, rigor, and depth in the process, paving the way for the data analysis process. As Bringer et al. (2006) pointed out, some researchers may be skeptical about using CAQDAS software because they may not understand the technology behind it or because they believe in the "false dichotomy between research tool and process" (p. 263). They go on to clarify that "inherent in questioning how research may have been different [if CAQDAS software had not been invented] is the implication that the tool (manual vs. computer) is the main determinant in the research outcome" (p. 263).

In other words, QualCoder, as well as any other CAQDAS technology, cannot substitute the quality of the research and its researcher. That is not its purpose. QualCoder can only make a specific stage of the research process, that of the coding process, more accessible, enriching, and informative without diminishing the epistemological, methodological, and philosophical context of any qualitative research/er. QualCoder can be used as a tool to stir up creative discussions among professionals about the coding system without dictating how the rest of the research project will unfold. It can only ensure the creation of time and space researchers need to have in order to enjoy the much more enticing stage of research analysis.

Furthermore, as already stated, QualCoder, as an open-source software, can further assist in the production, dissemination, and communication of scientific knowledge by making its embodied practices of research coding known to the public and thus promoting the open-access culture to which it belongs. QualCoder's originality, as far as this article suggests, does not lie in its potential as another qualitative data analysis software but rather in its efficiency and transparency-building practices it can provide for a researcher, a research project, and/or a network of researchers who adhere to the epistemological and methodological implications of the open-source research culture.

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Notes on Contributors

Alexios Brailas, PhD, is teaching faculty at the Department of Psychology, Panteion University, Athens, Greece, and adjunct faculty at the Hellenic Open University, teaching courses on research methods, psychology, pedagogy, systems thinking, narrative inquiry, and creativity. He is also organizing and facilitating group workshops and community empowerment interventions. His approach to research is participatory, design-based, and practice-focused.

Elena Tragou, PhD, is an adjunct lecturer at the Hellenic Open University. She is a systemic psychologist/psychotherapist, researcher, and writer. She has published two books, numerous research articles and has been participating in European and International conferences presenting her work on systemic research and therapy, human communication, and supervision and therapy.

Konstantinos Papachristopoulos holds a PhD in Social/Organizational Psychology. Currently, he is a Marie Curie Fellow at the Athens School of Fine Arts. He has been working for Local Authorities, NGOs and research institutions since 2002. For the last 12 years, he has been training on the Systemic Approach at the Athenian Institute of Anthropos.

ORCID

Alexios Brailas, https://orcid.org/0000-0002-2016-4438
Elena Tragou, https://orcid.org/0000-0001-8336-902X
Konstantinos Papachristopoulos, https://orcid.org/0000-0003-1672-5703

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