Introduction

Qualitative research techniques are used when there is a need for a new understanding of a situation. To achieve an understanding of complex situations, the challenge faced by the researcher is to manage that complexity. This chapter shows that all qualitative research requires knowledge organisation. Managing the overwhelming detail of data and putting it into context requires sophisticated storage and access methods, which can assist a project of any size to achieve a better, more rigorous outcome. Software designed for that purpose is useful in qualitative research of any scale. And a toolkit for qualitative analysis is also a toolkit for organising many types of knowledge – what is known \textit{a priori} and what is discovered during the enquiry, as well as the knowledge derived from search and scrutiny. Researcher and manager share the task of bringing these together in order to reach an understanding of a situation, an issue or a problem.

Why should a software program to assist qualitative research be viewed as a toolkit for knowledge organisation? For many qualitative researchers the terms seem incompatible – qualitative work is about intuition, exploration, theorising and discovering, not about managing or organising what is known. But the task is to account well for complex data, and the challenge is to manage that complexity. Qualitative research techniques are used where there is a need for a new understanding of a situation. How is a problem perceived by the people concerned? Why is an innovation unsuccessful or a message rejected? When the goal is to learn from people’s behaviour or the meanings they
place on events, the researcher seeking to learn from the data must avoid pre-emptively reducing it to numbers or quick summaries or quotes. The detail is retained until it is understood and the context is retrieved in order to understand. So these data are complex in form (varied, unpredictably sourced and multilayered) and come in many shapes and sizes. Analysis is similarly complex, and never merely a matter of gathering and summarising everything that is available on a topic.

Enter computers as complexity managers. Qualitative software offers researchers a tool to achieve a better understanding. If rich descriptions of individual cases will do, researchers may not need computer tools. Small, neat projects allow rapid access to remembered quotations and attractively illustrated reports. But most qualitative research is not like that. For projects of any scale, researchers have to do justice to complex material, and knowledge management is the first and necessary task. At the extreme, in an international or cross-site project the researcher must thoroughly explore complex texts and non-textual data at both the micro and the macro level. Managing such overwhelming detail and seeing it in context requires sophisticated storage and access methods. And those methods can assist a project of any size to achieve a better, more rigorous outcome.

The development of qualitative software has brought an increasing emphasis on the management of different sources of knowledge as software tools have matured. This chapter tracks the progress of software tools for which the present author was part of the development team: the NUD*IST software, and later NVivo.

Developing tools for qualitative computing

The story of qualitative software is a short one in evolutionary terms. The first generation of qualitative programs became available in the late 1980s. The first international conference on qualitative computing was held in 1989 (Fielding and Lee, 1991, 1998), and the first on a particular program (NUD*IST) followed ten years later. Today qualitative software is widely used and taken for granted. In a remarkably short time computer techniques not only were accepted but became expected, and computerisation contributed significantly to the spread and influence of qualitative research (Weitzman and Miles, 1995). In their 1994 edition of a 1984 textbook that made mention of computing Miles and Huberman (1994, pp. 43–4) declared that ‘the researcher who does not use software beyond a word processor will be hampered in comparison to those who do’. Their enthusiasm was understandable,