A reflective journal as learning process and contribution to quality and validity in Interpretative Phenomenological Analysis

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Abstract

Using selected, contemporaneous illustrations from the reflective journal of a doctoral student undertaking data analysis for the first time, this article examines the relationship between journaling as a learning process when undertaking computer assisted qualitative data analysis and establishing quality and validity in Interpretative Phenomenological Analysis (IPA). The writing of the journal is shown both to enact some potential validity criteria (e.g. in producing an audit trail) whilst also recording and reflectively prompting the process of learning, interpretation and bracketing, thus evidencing transparency. By using a journal inside the software package and alongside the stages of the IPA, analysis within the software package, it is argued that quality and validity become dynamic, not static constructs. These constructs are intimately linked to the researcher-learning-process and permit a critical stance to be taken.

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Keywords

Learning process, reflective journal, quality and validity, computer assisted qualitative data analysis, interpretative phenomenological analysis (IPA)

Introduction

Interpretative Phenomenological Analysis (IPA), as a qualitative research approach initiated and developed primarily in the field of health psychology (Smith, 1996; Smith et al., 2009), has attracted significant debate about what might constitute quality and validity within its methodological framework (Chamberlain, 2011; Shaw, 2011; Smith 2011a; Smith 2011b; Todorova, 2011). Interest in quality and validity has centred on all stages in the research process; sample identification, data collection, data analysis (interpretation) and representation in print (Brocki et al., 2006; Gee 2011; Larkin et al. 2006). At issue is whether and how criteria might be developed particular to IPA or whether the debates that discuss quality and validity remain the same as for all qualitative research methodologies (Guba and Lincoln, 2005; Lincoln and Guba 1985; Seale and Silverman 1997; Robson, 2002; Rolfe 2006). This article focusses on how a student tackled the issue of quality and validity in IPA data analysis while carrying out an IPA project for the first time as part of a PhD. It examines the activity of journaling,
(i.e. the use of a reflective researcher-created regular written log) as a learning process when undertaking data analysis. Specifically by using a journal inside a data management computer software package (in this case QSR Nvivo 10) and alongside the stages of the IPA analysis, also within the software package, we argue that quality and validity become dynamic, not static, constructs intimately linked to the researcher-learning-process. We examine the extent to which journaling enacts criteria by which ‘quality’ might be defined and recognised. We show how its process as student learning tool meshes with the double hermeneutic, essential to the IPA approach, whilst holding it up to critical examination. Excerpts from the researcher’s journal presented in italics are used throughout to illustrate.

**Quality and validity in data analysis**

Numerous authors attempt to produce criteria for assessing the quality and validity of qualitative research both generically (Hammersley, 2008) and across a range of disciplines such as social work (Barusch et al. 2001), nursing (Rolfe, 2006) and psychology (Yardley, 2000). Hammersley’s précis defines a contrasting spectrum; at the one end a finite set of observable and universal indicators and at the other a list of considerations agreed in local circumstances. Hammersley’s own preference for
methodological approaches such as IPA is the latter. He argues that criteria which need to be taken into account come about as part of the judgement process, are used in particular contexts and are cyclical and living. Studies that come later, he suggests, will judge their own quality and validity against similar previous studies but will do so by interpreting and sometimes re-interpreting criteria according to the situation (Hammersley 2008 p.160). Initially, Smith and colleagues applied the criteria to measure quality and validity as outlined in Yardley’s four broad principles to IPA: sensitivity to context, commitment and rigour, transparency and coherence and finally impact and importance (Yardley in Smith 2009 pp180-183). More recently this application has been refined (Shaw 2011, Smith 2011a and Smith 2011b), albeit Smith concludes that assessment, or quality and validity, will always be a matter of judgement (Smith, 2011a p.15). In this article it is argued that quality and validity are achieved in three ways; reflexivity, reflection and journaling.

IPA proponents contend that analysis of data in IPA should subscribe to its theoretical principles; phenomenological, hermeneutic and idiographic (Shaw in Forrester 2013; Smith 2011a and Smith and Osborne 2008). IPA, as its name suggests, involves the interpretation of a phenomenon and the analysis of this. Interpretation is twofold; first, the participant has to make sense of, or interpret, the phenomenon of interest. They then, in effect, interpret this for the researcher. Second, the researcher
endeavours to make sense of the participant’s interpretation and does this in two ways, by empathising with the sense making and also by questioning this. Referred to as the double hermeneutic, acknowledgement of this process is crucial to judging whether research carried out using IPA is of a high quality and valid. As captured in the debate about the development of criteria for quality and validity in IPA, the researcher needs to be able to demonstrate that they have been true to this double hermeneutic, in both its incarnations (Chamberlain, 2011 Shaw 2011, Smith 2011a, Smith 2011b, Todorova 2011).

The other underpinning theoretical basis of IPA is idiography or, the concern with the particular. The focus on this aspect has attracted criticism, not least because it is argued that such a focus can ignore the social context (Todorova, 2011) and provides psychological depth, but not contextual width (Houston and Mullan-Jensen, 2012). Smith (2011b) acknowledges this criticism but contends that as the methodology matures there will be an emergence of a synthesis of personal experience and a more explicit social context. Analysis, Smith argues, should also subscribe to the individual and the experience and be judged by this (Smith 2011b). Here, quality and validity can also be present if the analysis focusses on the individual experience, and in context.
An additional concept concerning the process of data analysis in IPA, as in other qualitative methods, is bracketing. This process attracts much debate, especially among phenomenologists (Finlay 2002), and again refers to two things; the putting to one side of sensory experience to tune in with the others’ sense-making, or to ‘see’ directly, and the putting aside of preconceptions to engage in the sense-making (Tufford and Newman 2010). ‘Pure’ phenomenologists argue that to see directly and also put aside is not possible (Giorgi, 2010 and Giorgi 2011). In IPA terms, bracketing is used in both ways (Smith 2010). In addition, it is contended that bracketing facilitates deeper levels of reflection for the researcher including during the interpretation of the data (Tufford and Newman 2010 p. 81). Clarification of bracketing and the way in which it is being used is, therefore, another measure of quality and validity in studies which employ IPA. Here, journaling is used to enact bracketing.

Last a criterion of relevance concerning analysis is transparency, or as Smith states, ‘what steps were used in analysis’ (Smith et al. 2009 p. 182) and, later, ‘so [the] reader can see what was done’ (Smith 2011a p. 17). This sense of a research audit trail has also been a feature of feminist research, where notions of retrievable data and analytic accountability have featured (Stanley 2004; Stanley and Wise 2006; Wise and Stanley 2006). The process of data analysis is judged for its quality and validity if it is transparent and can be evidenced. For feminists, this includes being moral or ethical,
reflexive about the researcher’s own influence and allowing readers to ‘object’ or form a different view. Smith and colleagues agree that an independent audit is a powerful way of thinking about these aspects in qualitative research. For data analysis in IPA, annotated transcripts are seen as one of the elements of such an audit trail. A spectrum is also suggested. At the one end is passing the whole to a hitherto uninvolved researcher to ask her to conduct an audit; at the other is research supervisors undertaking ‘mini audits’, namely checking the annotations in relation to the text (Smith et al. 2009).

The use of a journal is an established tool for learning both in higher education generally (Morrison 2006) and in specific professions, such as nursing (Chirema 2007). The value of using such a journal includes that it enables active learning and reflection upon that learning (Thorpe 2010). In what follows, we argue that the use of a reflective journal, housed within the same software package as that used for analysis of transcripts, permit a critical stance to be taken to each of the above criterion denoting quality and validity in IPA. Furthermore, the writing of the journal enacts some of the criteria (e.g. in producing an audit trail) whilst also recording and reflectively prompting the process of learning, interpretation and bracketing, thus evidencing transparency. According to Smith the quality and validity of the final analysis is determined by the ‘personal analytical work done at each stage of the
procedure’ (Brocki et al., 2006 p.96). We show how doing so within the software package allows the researcher space to empathise, to question and to create or, in IPA terms, to interpret.

It is acknowledged in IPA, as well as other methodological approaches, that software packages cannot replace active person-driven data analysis (Langdridge, 2007 and Smith et al., 2009). The use of such a software package to automatically code large chunks of text is just that. Analysis of the data along with interpretation is still required. Nonetheless, using a computer software package such as QSR NVivo or Atlas TI when undertaking analysis has reported benefits; it is useful in managing comparatively large data sets, it allows coding in multiple dimensions, within it trees of codes can be created and manipulated and it can rapidly afford a search of large amounts of text (Wagstaff et al. 2014 p.9). These benefits refer to the mechanical ways in which software packages can be used not, as is argued here, the reflexive learning process. The use of a software package instead can enable and in turn, be judged against, as being of quality and valid. Wagstaff and colleagues, by their own admission, make a superficial examination of the use of a computer software package in studies using IPA. However, Stanley and Temple have cautioned researchers to be aware that technical features of software packages actually have epistemological consequences that need to be addressed (Stanley & Temple, 1995). Mindful of these points, this
article involves a deeper exploration, using a current doctoral study, but beginning
with an explanation of the process of how the data analysis was undertaken.

The learning process

The doctoral study from which the data are being analysed concerns the exploration of
the role and experience of Approved Mental Health Professionals (AMHPs), a statutory
role in which various approved non-medical professionals assess people for admission
to mental health hospital in England and Wales. The study received ethical approval
from the University, each Health Trust that employed participants and the social care
equivalent, the Association of Directors of Adult Social Services. The data are
transcriptions of semi-structured individual interviews with a purposive sample of
AMHPs including, as part of the interview, a discussion of a drawing produced by the
participant; each describe the experience of undertaking the AMHP role, specifically
undertaking a Mental Health Act assessment. All data were transcribed by the student
and imported over time into the software package QSR NVivo 10. Once formatted,
data analysis proceeded on a case by case basis using the three step approach
common to IPA; description, use of language and use of concepts (Shaw in Forrester
2013; Smith et al 2009). The student, who is undertaking the doctoral study which
forms the basis of this article, had never previously undertaken any qualitative data analysis or IPA but had received specific training and education in the approach. Her supervisors (Authors 2 and 3) suggested the use of a reflective journal integrated within the first-time analysis she was undertaking that could also form the basis of supervisory discussions. The journal recorded in real time the thoughts, feelings, reflections and links to theory and publications that the student was making *during* the process of data analysis. This contemporaneous document was created within the internal memo source section of the software package. This simultaneous housing within the same software as the data analysis, and also as it proceeded, facilitated direct links being made between the notes in the journal and the specific pieces of text that had prompted the thoughts. In so doing it also enabled the student to have a sense of control over the process where a journal written and maintained outside of this package may not have had the same effect.
The focus of the journal was firmly, in the first instance, on the learning process of the student as she undertook the analysis, rather than on further interpretations of the data and reflexivity which happened later. In effect it provided a learning context in which the double hermeneutic strategies were being enacted.

The following are excerpts from that journal organised with an eye to exploring quality and validity in data analysis. Editing has prompted the choice of excerpts but the text of the journal used is verbatim. In what follows, the third person is used as
The authorial voice of this paper, however the first person is used for the authorial voice of the journal excerpts. In reality, these are one and the same individual but the contrast in ‘voice’ allows for the subsequent reflective commentary on the original journal text to be made clearer.

The learning process - the mechanics of using a software package for the first time

As the student began the process of data analysis, she was encouraged by her doctoral supervisors to consider the use of a software programme to manage the data. Although she had a large data set she was reluctant at first; the student has a preference for reading hard copy books as opposed to e-readers and had also recently experienced a ‘loss’ of a library on a computer software bibliographic management tool. Would she warm to the process and could she trust it?

Having attended training and acquiring a text book for reference, the student began to wonder how the use of a software package would ‘fit’ with IPA and reflected on Bazeley and Jackson’s ideas that users of software can be close to the data and distant from it (Bazeley and Jackson 2014 p. 7).
I am not sure the latter [use of software management tool] ‘fits’ with IPA which as I understand it proposes immersion in the data. I cannot comment on other benefits at this time, but in reading Nvivo texts (Bazeley and Jackson 2014), I am probably becoming convinced that using such software will allow me to do both (be close and stand away). The software is a tool to help sort but not to do the analysis itself.

The student wanted to give some thought to the way in which she could capture and code the transcripts and then in turn capture and code her thoughts as the interpreter of the data, in other words to engage in the double hermeneutic. At this stage in the process the student was beginning to use the journal to reflect upon the reading she was doing in relation to the use of the software package to manage the analysis. First, she queried the use of annotations. Bazeley (2014 p 197) suggests ‘to use annotations or see also links to record memos or comments on passages of particular interest’ but the student thought this might be problematic and instead decided to use them to explain abbreviations used by participants:

I think that to annotate is a problem as while they are notes that illuminate or briefly reflect upon a specific part of the source they cannot be coded. I will use annotations to explain abbreviations etc.
She also questioned Bazeley’s second suggestion to use codes to attach thematic style labels to sense or meaning units in the text (2014 p 197):

Yes I think this is a good idea, but I am wondering if it is best to make a memo for each source (treating each transcript as an individual unit or source) and then in turn code this. I might in the memo for the source be able to distinguish between content (normal text), linguistic comments (italic) and conceptual comments (underlined). These are in effect initial comments. I am wondering if I can use the see also link to 'link' these. I can then code these from the source memo for emergent themes. This would provide a clear audit trail of the analysis and also always anchor the interpretation in the text.

The student also considered the reported disadvantages included amongst them having to improvise the dual level coding (Wagstaff et al. 2014). In the journal she queried this and concluded that the use a source memo would enable initial comments made during analysis to be interpreted further or the double hermeneutic:

I am not sure that's [dual level coding] a problem is it? Or, I can see if the memo source using three types of initial comments as described by Smith et al., 2009 will work. I would think that any researcher regardless of methodology would need to be mindful of how best to use the software analysis tool to fit
their data analysis and to justify and defend this. One participant in the Wagstaff et al. paper used annotation to do the initial comments and nodes to create emergent themes. My concern with this is that the annotations cannot be coded. Doesn't a source memo overcome this i.e. become the initial comments and then when coded become the emergent themes. For me the coding of the source memo is very clearly the researcher's interpretation or double hermeneutic.

The student decided to stop thinking about the process of analysis and get on with the doing of it! She formatted her first transcript according to the recommendations (Bazeley and Jackson 2013 p.59.), and imported this into the software package. She added a linked memo, and annotated the transcript to provide explanations of terminology the participant was using but which was restricted to the understanding of participants and, in this instance, the researcher.
In addition, the student used ‘see also’ links to anchor the text externally. For example, where the participant referred to ‘role over’ the student was able to link this phrase to an excerpt from the photograph of the picture drawn by the participant during the interview by way of clarification. The meaning might otherwise have been confused:

Figure 3. Excerpt from data showing ‘role over’ phrase highlighted
Throughout, the student was using the journal to reflect upon her use of the software package to enable her to analyse in IPA but over time the journaling activity changed. Rather than using it to reflect on the tasks of doing the analysis, the potential for using the journal within the analysis became apparent. The student began to use the journal not just to record her thoughts about the mechanics of the data analysis process but also of the connections and interpretations she was beginning to make, including the impact of her own self on this:

Note to self, perhaps need to create a journal in NVivo capturing my thoughts about data analysis including the impact of myself in this

In this, stage one of her journaling experience within IPA, the student learned to transform the reflective journaling process from one of recording her thoughts.
about the analysis process to one of using the journal within the analysis process. She began to recognise its potential to enable key elements of IPA analysis, such as exploring the double hermeneutic, but was yet to play with this potential and consider its status within the construction of quality and validity in her study.

The learning process - from description to interpretation

Larkin et al. (2006) discuss the opportunities offered by IPA declaring that it is not a descriptive methodology alone. In their literature review of published papers in health psychology using IPA, undertaken with the aim of critically evaluating its use, the authors conclude that little attention was being given to the interpretative facet of the approach. They maintain that Smith's use of the borrowed phrase 'the insider perspective' has been overused and in a simplistic way, and go on to suggest that many studies have, in their opinion, been too easily satisfied with a first order analysis; that is analysis that does not develop to an interpretative and conceptual level. The student understood how remaining at first order analysis, or description, could happen as she recorded and reflected upon her thoughts during the analysis of the first transcript where she felt it was 'easy' to describe. It helped her to be aware that she had yet to take the further step. She also captured her emerging understanding of the
idiographic commitment and began to incorporate conceptual thinking into her journal:

They [Larkin et al.] comment that the researcher should have two aims in mind when analysing: the first to understand the participant’s world and describe what it is like, the second, to develop a more overtly interpretative analysis which positions the initial description in relation to a wider social, cultural and theoretical context; a second-order account to critique and comment conceptually on the participant’s sense-making [Larkin et al. 2006] (p.103).

In other words, the student mused, they [Larkin et al 2006] suggest the researcher needs to wonder; what it means for the participants to have made these claims and to have expressed these feelings and concerns in this particular situation.

For this study the student realised that understanding and sense-making of the experience of being an AMHP when conducting a mental health act assessment and participants’ engagement with it was central. As the student became more confident in her understanding of the features of the software package she began to move away from the mechanics of the process and instead reflected upon the quality and validity of her analysis. To begin with, as we have seen, this focussed on moving from understanding what participants were describing to undertaking an interpretation of
this description and it also meant recording this process as it was happening over time.
The software package’s date and time function readily captures this as illustrated in
the following excerpts:

01/10/2014 15:58 reading through again it is interesting to notice things
differently.

02/10/2014 11:45 I continue to think that my interpretation at this point lacks
depth. I have tried to look at the text in different ways; reading from the bottom
up and looking at words in a different order.

As reported by Rodham et al., (2013, p 3.), Le Masseur suggests that
researchers should become curious. Le Masseur uses the analogy of putting an object
in a paper bag. The bag acts as a temporary bracket because as he suggests it could
prevent us from knowing and labelling the object by sight. In turn if we placed our
hands into the bag and not yet recognise the object, we could have a fresh experience
of the object without the interference of our prior assumptions and knowledge. Thus,
he continues, its qualities of roundness or roughness might become more apparent to
us. The student recognised that in the process of analysis in IPA, it is important for her
as the interpreter to understand what preconceptions she brings and to 'bracket' prior
experience in order to prevent this influencing interpretation. Or, if this is not possible,
she has to make these preconceptions explicit. She used her journal, rather like a 
sounding board, to do this as well and crucially in real time as the analysis was 
progressing and not in retrospect:

Currently, my experience rests on a number of influences; first-hand knowledge 
of doing the [AMHP or equivalent] role and how I experienced this, in-depth 
reading and ongoing around the role, and an increasing awareness of 
sociological and psychological concepts. I am a female. I am a registered social 
worker. Should I acknowledge societal and professional socialisation? Transcript 
N01J for example is a male nurse. Do I have preconceptions about nursing and 
nurses who are male which may colour my ability to interpret? There are two 
ways of understanding the double hermeneutic in IPA; one is to make meaning 
of the person making meaning, the other is to have empathy and then to 
question. I think at this point I am at the empathy part.

At this point the student was aware that she had to develop a hermeneutic 
account or as Larkin et al., (2006) describe, the person’s relatedness to the prevailing 
topic of interest. For them the key objects of concern in the participant's world and the 
experiential claims made by the participant are the key to the first-order description. 
The student also understood, and recorded this understanding, that the analyst is
doing more than just describing in IPA. They are, according to the proponents of the methodology (Smith 1996, Smith et al. 2009), also offering an interpretative account of what it means for the participant to have such concerns within their particular context. IPA, it is suggested, allows the researcher to transcend or exceed the participant's own terminology and conceptualization. That said the phenomenological account has to be central and contextualised. Examples, or evidence, need to be traced back to a recognisable core account (Smith in Larkin et al. 2006).

The student knew at this point that they were still empathising and recorded this. It also became clear to her that she had to interpret what it means for a particular participant in a particular context:

*11/10/2014 11:15 Larkin et al. [2006] balance representation against interpretation and contextualisation. In IPA the analyst is offering an interpretative account of what it means for the participant to have such concerns in a particular context*

*18/11/2014 10:06 what it means for the person in this particular situation (Larkin et al. 2006 p. 104)*

Also, during this period, the student came across an article discussing the argument that most IPA studies fail to explain how the analytical process in IPA has
been defended as trustworthy [or valid] (Rodham et al 2014). The article focusses on
shared analysis as experienced by the authors, with the aim of stimulating discussion
about the trustworthiness of one’s data when employing IPA. The student also began
to consider how she could defend her analysis in the same way. Writing it down in her
journal made the challenge more real and more immediate. It anchored her thoughts
to this issue and provided a fixed point to which to return to recognise and re-
recognise this challenge:

04/10/2014 09:50 I have been reflecting upon the process of analysis and
especially my role as the interpreter which is a fundamental element of IPA. In
addition, IPA is described by Smith et al. (2009, p.184), as a creative process. So
how then can the process be defended?

Rodham et al. contend that being able to develop a curious stance to one’s data
requires reflexivity; to self-monitor biases, beliefs and personal experiences. They go
on to state that the process of reflexivity is an essential part of engaging with the
double hermeneutic in IPA, not to put aside one’s preconceptions, but to become
aware of them and their potential influence (Rodham et al.2014 p. 4).

The student agreed with Rodham et al. that to defend is important, but she
also questioned whether the double hermeneutic had been demonstrated. In writing
down her reflections, the journal provided a means of validating her emerging questions as well:

Their [Rodham et al.] paper concludes that many researchers in IPA do not clearly explain analytical trustworthiness. While they agreed that being able to defend the process is important, for them, their conclusion misses the element of the making meaning of making meaning. This process also needs to be made clear.

In this second stage, the student starts to integrate reflections on the theoretical work she has consulted with her living process of data analysis, building a personalised critically analytic stance. The journal’s reflexive power becomes apparent for its identification of the border crossings between description and interpretation as it is understood in IPA. Journaling within the software package provides a real time record to which to return and re-assess as the interpretative process proceeds.

The learning process - establishing transparency

The student’s thoughts also began to focus on the transparency of the process that she went on to record. She continued to develop her understanding of the mechanics of
the software package and became aware with increased use that some processes were not going to ‘fit’. For example, she came to learn that one is not able in the software package to annotate using different formats. She therefore would be unable to analyse annotations distinguishing between the suggested three-way approach as suggested by Smith (Smith et al., 2009). However, this, as it turns out, did not matter as she was becoming more aware that her use of the journal was allowing her to reflect upon the learning and in turn she could use journals linked to each source as a way of not just analysing each source but of adding layers. These in turn can be analysed and in effect evidence a double hermeneutic.

In addition, the use of the journal contained within the data also allowed her to reflect upon the process of analysis whilst feeling in control, and to record this:

27/11/2014 17:42 I am becoming more au fait with this software package. [supervisors] suggested that I record the actual process by which I reached decisions about analysis process. I chose a first script because it, from memory, seemed to be fairly neutral. I had no strong emotional reaction to it at the time of interview, recording or transcription. However, I am now picking up (and described in supervision) that the manner of this participant comes across as 'macho' and suggested that this did not bother me. However, it must do as I
have commented on it and then tried to dismiss it. Is this then something to do with the way in which this participant experiences the work he was describing which may be what people do in order to exert some sort of control? Or, do I have some anecdotal or theoretical perception of AMHP work as attracting more men (than other social work roles - apart from managers).

The student had also moved from the first script to a second and interestingly began to question whether her own social work values were shared:

29/12/2014 11:48 I have spent some time looking at the second of my scripts (N05I). It strikes me that the language used in this second script refers to the person being assessed as somehow different to the assessor. I, personally, find this disturbing and not what I understand the role of the AMHP to be. Or, am I being naive. Is the idealistic social worker raising its head here? I am conscious that I am a social worker by profession and I am sure I would not refer to the person as ‘them’.

She also imported and started to analyse further scripts and to begin analysis:

10/01/2015 14:38 I am now reading fourth transcript and get a sense that the new codes which are arising are fewer, but I also sense that there is a pattern emerging with regard to what the participants tell me and the order in which
they do. I am also beginning to think that the codes can be merged especially concerning role attributes.

She began to make sense of themes that were beginning to emerge. First of the sense of participants’ hovering:

*There is a sense of separation being described in the scripts I have looked at to date almost as if the role involves an ability to hover over the situation, to ensure calm, to organise matters and to advise ‘from above’ all especially while keeping the person in the centre of thinking.*

13/01/2015 19:37 I am beginning to wonder as I read through transcript four whether there is an overriding theme to do with distance and nearness.

Up until this point in the analysis the journal and the reflections contained within it had been an internal matter; to her as the student but also inside the data as stored in the software package. For supervision, the student decided to export the journal as it had been completed at that time and to send it to their supervisors in advance of their next meeting. Her thoughts in doing so were to account for the analysis and to evidence this and in effect provide the basis of a ‘mini audit’ by her supervisors. It has in turn resulted in this article.
In this third stage, the journal as learning process becomes fully integrated into the interpretative analysis. Materially its excerpts are linked to passages of data by means of a function within the software package, conceptually its reflective content layers the emerging analysis further in prompting additional lines of enquiry and firmly evidencing the double hermeneutic. The journal produces its own audit trail evidencing not just transparency but also the personal rigor of the questioning and reflecting researcher. In contemporaneously writing down her thoughts she does not just clarify them in present time but also enables them to be further questioned, reinforced or dismissed over time as they are seen in retrospect as artefacts of their time. As the analysis progresses they may or may not retain their interpretative validity as conclusions on the data but they certainly will retain their validity as markers that quality assure the interpretative process.

Conclusion

The use of a journal is an established tool for the recording of learning and prompts the process of interpretation and bracketing as a reflective mechanism. This article discusses the relationship between such use and the process of data analysis when they are both housed inside a software package. We argue that doing so within a
software package enhances the way in which a reflective journal can be used challenging the contemporary belief that computer assisted data analysis is a static construct. Journaling within a software package interweaves with the double hermeneutic which is essential to the IPA approach while at the same time holding it to critical examination of its validity. The journal that began *about* the process became *within* the process. Using a journal inside the same software package housing the data is dynamic, simultaneously enabling the process of moving from description to interpretation and the development of the hermeneutic and later double hermeneutic, essential to IPA, and the assurance of its quality and validity.

The testimony upon which our argument is based relies on the experience of one student. The process may be unique to them. In addition, the excerpts, albeit verbatim, have been edited by us to illustrate. Other excerpts may not be as rigorous, or may question our assertion. The time line of the analysis being discussed is also at an early stage. While the student at this time reports feeling ‘in control’, this may change as the analysis deepens and the interpretative layers increase. For now, the student continues to uses the journal within the software package to reflect, in this instance upon the impact on the analysis of writing this paper:
The first [interruption] has been the pulling together of an article at the suggestion of my [authors 2 and 3]. I really enjoyed doing this, but got to the point where I had to send a draft [to them] in order to free up space for continuing with the analysis........that said, this feels like a natural albeit enforced break and I know think I am gearing up to return to next stage.

Learning, in this instance is the process of building an argument within, and the iterative process required for the preparation of a paper fit for consideration for publication. This, a relatively new experience for this student has, to some extent, interrupted the flow of the data analysis within the software package. However, the student has also realised that analysis is an ongoing process. The first journal extracts were exported externally and made known to supervisors. Upon this exportation, analysis and reflection themselves took on a further incarnation and, for this student, has been another important aspect of the learner-researcher-process. As data analysis and journaling within the software package continues so will the interpretative process and the evidencing of its quality and validity.
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