

Can Teaching Critical Reflexivity be Improved Using Metaphors? The Hippo in the Room

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Abstract

This case study investigation reflects on the use of metaphors to teach postgraduate education students the importance of personal bias and subjectivity to their research, and advocates the use of critical reflexivity to deal with it. Students are reluctant to be critically reflective as they can feel threatened by the reflective process, feel they can sit apart or outside their research, write without bias and/or feel critical reflection may damage their research findings. It explores the effectiveness of an approach to overcome this reluctance by applying a metaphor. In a Zambian research class, students introduced a metaphor for personal bias by likening it to an encounter with a hidden hippopotamus. These are difficult to tame, hard to deal with, and can remain hidden for a long time. They appear unexpectedly, cannot be ignored, and awareness the main defence. Subsequent dissertations showed an improved early adoption of critical reflexivity. This metaphor was then used as a key discussion point on a postdoctoral education programme in the UK and investigated formally using focus groups. Students reported a greater understanding of personal bias, recognised the importance of being critically reflexive, and felt the metaphor was instrumental in their understanding of the need to advise of their position in the research. Underpinning this approach is the assertion that metaphors can help explain personal traits that are difficult for individuals to describe (Hoggan, 2016). The use of a personal values framework; morality, competency, personal and social behaviour, provided a supportive writing framework resulting in an increase in critical reflexivity early in the students research.

Keywords

Teaching, Critical Reflexivity, Personal Bias, Research, Metaphor

Introduction

Social research is inherently entwined with the researchers own personal bias and values. A key aspect in teaching qualitative social science research methods to early career researchers is the need to impart the knowledge of the effects of these factors so students can recognise and thematise the partial nature of their research (Butler, 2005). In particular it is recommended the power relationships of the supervisor, researcher and participants should be reflected on and advised of in the research (Bondi, 2009). Using critically reflexive observations gives the researcher a method of informing how knowledge gained from their research has been affected and formed by the researchers own position in the study (Finlay, 2003). This paper reflects on the difficulties of teaching professional postgraduate students how to recognise and deal with personal bias and their inherent values in their research. It reports on lessons from research classes in Zambia and the UK, and shows students are more likely to discuss and report personal bias when discussed as a hypothetical non-personal concept. In Zambia students gained an understanding of personal bias by likening it to an encounter with a hippopotamus, improving early adoption of critical reflexivity in their research. The same metaphor was then used and further investigated on a doctoral education programme in the UK with the students also reporting a greater understanding of the importance of being critically reflexive, a greater understanding of the nature of personal bias, the need for critical reflexivity early in their research, and felt better able to create a critically reflexive approach in their research.

Positionality, Bias, and Critical Reflexivity

Many practices and methods are advocated in qualitative studies to ensure research is founded in good practice. The need to respond to the researchers' position of power in the investigative structure has led to a strong emphasis for self-reflection on the researchers own place in the research, and the use of critical reflection to advise of its effects (Daily, 2010; Greenbank, 2003). Mackay and Tymon (2013: 644) describe critical reflexivity as the "conscious review of an individual's subjective position in their research". This subjective position is at the centre of the research in many educational studies and its effect on the results of the research is difficult to plan out using positivistic methods. Most qualitative research is affected by positionality and bias (Greenbank, 2003) but this is likely to be emphasised in practitioner research which is often practiced as a reflective exercise on something within the researcher's own influence as a professional (such as teaching). This therefore places the researcher in a central position in terms of power, and authority, and their personal bias and

position as an insider in the research, will naturally influence the way the research is undertaken and influence results. It is the authors opinion that this subjectiveness is so central to the nature of qualitative research that it cannot be completely planned out and so must be recognised as part of the research as early as the method (Ping-Chun, 2008).

However, not all academics advocate or use reflexive practices in qualitative research. Newton et al., (2011), in a large scale literature review of qualitative studies, found a lack of self-reflection and a reliance on positivistic methods was prevalent as researchers attempted to work bias out of their research and find absolute truths. This is unlikely to be possible in qualitative research especially where the researcher is also a practitioner, as the intrinsic nature of this type of research provides many variables and co-variables, all of which are unlikely to be determined and dealt with by a positivistic approach. These will include time, power relationships, subjects, situations and feelings. Therefore the need to teach students to engage with their position, bias, and subjective assumption, appears fundamental to good research. Greenbank (2003) argues that critical reflexivity is the only way of dealing with the complexities involved in advising of a researcher's own position in the research, and therefore given the difficulties in getting early career researchers to engage with this, it seems relevant to explore teaching and training methods which aid qualitative researchers understanding of the concept.

Teaching Reflexive Practice

There is a reluctance among research students to recognise and deal with bias by reflecting critically on their own position in their research. This is recognised academically (Ping-Chun, 2008; Adriansen and Knudsen, 2013; Hibbert, 2012) and makes teaching critical reflexivity difficult. Students can feel threatened by the reflective process (Borochowitz, 2005), they feel they can sit apart or outside their research and write without bias (Gurstl-Pepin and Patrizio, 2009). They may be unfamiliar or not comfortable with the terminology used (Gazdula, 2015), feel critical reflection may damage their research findings even before critical review, and are reluctant to be self-critical as they feel it may undermine their research (Fook and Askeland, 2007). Anxiety about discussing personal traits is also considered to be a key obstacle to reflection (Ruch, 2002), and Merriam (2004) argues even experienced research students will not have developed the theoretical capacities to critique their own ideas effectively. The professional backgrounds of the students observed for this paper appear to have consolidated these ideas as the managers in the study avoided

being critically reflexive because they “are used to taking responsibility for making decisions and reducing complexity,” (Adriansen and Knudsen, 2013:120). The UK students investigated in this study (n=18) were from health, engineering, government, and education, and their position as managers or professionals appeared to engender a singularly right or wrong view of their research subject with little attention made to margins in between, or their personal situation in the research.

The teaching of how to deal with bias, positionality, and approaches to being critically reflexive is also varied. Research supervisors variously see reflexivity as something to be gained by the student through reflexive conversation (Moon, 2007), as part of the supervisory support in the epistemological journey (Bruer and Roth, 2003), taught formally (McKay and Tymon, 2013) or even left until very late in the research and advised on as the research is being written up. Jenkins (1995) argues that social research is rarely going to be perfect so it may be better for early career researchers to make mistakes and use the later stages of their dissertation as a reflexive learning instrument. Conversely Ping-Chun, (2008) asserts reflexivity cannot be learned passively or advised on later in the research and argues researchers will benefit from early engagement with their personal bias and from having a suitable advisory approach built into to their methodology from the beginning. Ping-Chun advocates critical reflexivity as early as the research instrument design stage. Perhaps the most important reason for good teaching practice in critical reflexivity is highlighted by Smith (2011) in recognising the dangers of becoming too reflective making the researcher “negative, overly self-critical and isolated,” (Smith, 2011, cited by Newton et al., 2013:645) which could negate the research and ultimately affect the confidence of the researcher.

Through personal experience of teaching researchers how and where to use critical reflexivity and supervising a number of resultant dissertations, it can be seen that early reflexivity helps build objectivity into the research during the research instrument design and begins the process of allowing the students identify an advised position early. It gives the student time to reflect and helps to begin good practice at a time when supervision is regular and interventions can guide the student away from the more dangerous aspects of reflection such as subjectiveness or over-criticality in planning the method and counter undue negativity generally.

While the difficulties in teaching and getting students to use critical reflexivity as part of their research is documented a search of the 583 combined databases on the Open University database facility brought up no articles discussing the use of analogies or

metaphors in teaching critical reflexivity. Yet Mithin (1996, cited in Grainger et al., 2004) argues that the use of metaphors, analogy and mental models are a distinguishing feature of homo sapiens and advocates their use in teaching on professional education programmes.

Case Study

Two postgraduate classes nine months apart are presented as an investigated case study. The first class in Zambia highlighted a possible approach to aid teaching. Here a lecture gave definitions and overview of positionality, bias, subjectivity but in a number of subsequent discussions students began to argue against critically reflecting on the effects of their place in the research. They argued variously that they would plan these out, it was up to others to criticise their work, they were worried this would damage the findings before they even finalised results, and as a number would be given in at work, felt it might compromise their findings in a way which reflected poorly on them. The subsequent tutor led discussion with students developed the idea of using the metaphor of dealing with one of the country's dangerous animals. This unexpectedly was revealed as the hippopotamus for personal bias. Using the metaphor of dealing with a hiding hippopotamus generated a detailed discussion of bias and initial feedback showed the participants had a better acceptance of the need to show and deal with personal bias. Conversations with tutors marking dissertations later in the year revealed an increase in the use of critical reflexivity to deal with personal bias over previous cohorts. It was therefore decided to investigate this approach by using the same metaphor in a phenomenological study on a UK class. The classes had some similarities which underpinned the research, both groups of students worked full time, both were professional managerial students drawn largely from the health, management, engineering and teaching professions but the Zambian class (n=13) had more diversity as some individuals were managers from private organisations whereas the students in the UK (n=18) were solely from the public sector. The investigation in the UK used a focus group approach with two separate groups after the session with the tutor as the researcher. This was chosen as the investigative method because it was felt these would give particularly good interpretivist insights into student understanding of the topic (Wilson, 2016). Pre class discussions were held to uncover the students' current knowledge of personal bias and subjectivity in research, and post class focus groups were used to assess the effects of the class of the metaphor. The questions used to initiate the discussion were: What is personal bias? How might personal bias affect your research and

findings? How might you deal with personal bias in your research? Would identifying your personal bias improve the outcome of your research?

After the class the students were asked the following: If they felt confident they understood the concept of personal bias. How might personal bias affect your research and findings? Would identifying your personal bias improve the outcome of your research? Did the metaphor of dealing with the Hippopotamus help their understanding of the concept of personal bias?

Finally, discussions with dissertation tutors in the UK asked if they had seen an increase in the use of critical reflexivity.

The Zambian Class

The use of analogies predates modern teaching and can be traced back to Plato (Skinner, 2016). It is also reported in modern academic studies of teaching practice (James and Scharmann, 2007; Woody and Himelblau, 2014). African education has a historical tradition of using stories, metaphors, and analogies in education to impart and exchange knowledge (Omolewa, 2007). In Zambia, standard teaching materials were used to deliver a taught session on bias, positionality, subjectiveness and advocated critical reflexivity as an approach to advise of them in the research. The session consisted of a powerpoint lecture with definitions, examples, discussion points and advocated Rokeach's four personal values; morality, competency, personal and social behaviour (Rokeach, 1973) as a framework to help reflection, advise on their own place in the research and explain their subjectiveness. The subsequent discussion was typically difficult and students concentrated on discussing the negative aspects of critically reflecting on their own academic work. They felt this approach undermined their research and it was up to others to critique their work if they felt it was incorrect. As an alternative approach, students were asked to develop a metaphor or analogy for bias with the following criteria. They should think of an African example with some or all of the following features. It should be; difficult to identify, hard to observe, may appear unexpectedly, can cause considerable damage, needs careful consideration, can be planned for, but may be unavoidable.

During the session students felt this might be a Hippopotamus, these are untameable, difficult to deal with, and can be highly dangerous and they kill more people than any other mammal in Africa. If it can't be avoided the plan for an encounter would be to gain higher ground or shoot it, but the main defence is to make people in the vicinity aware of it. Likening personal bias to a hippopotamus brought a level of illumination

to the class. This became a run, shoot, or avoid decision with a plan to inform nearby communities. This was followed up by revisiting Rokeach's Personal Values and working through the framework for critical reflection. Subsequent observations of project dissertations and discussions with other supervisors on student research methodology suggested that methods of reporting and reflecting on personal bias had been taken into consideration to a greater extent than students previously undertaking the course.

UK Investigation

The use of the same metaphor was applied in a UK Doctoral class with education students (n=18) through a tutor-led exposition and a question and answer session to explore if it would help their understanding of bias and help critical reflection in their research. To investigate the usefulness of the approach focus groups were formed before and after the session.

Before the session the focus groups discussed three key questions: What is personal bias? How might personal bias affect your research and findings? Would identifying your personal bias improve the outcome of your research?

Students reported that they understood personal bias but either didn't feel it was relevant to their research as they would be able to use a positivistic approach in order to be objective and impartial, or that they would not let their feelings become involved in the research. They also felt they could manage their bias out by the method if necessary and they felt identifying bias would be self-detrimental to their research. Some admitted they were unsure how to deal with it and intended to ignore it completely. All students felt uncomfortable about reflecting on their own position in the research.

The class used the same structure and materials as the class in Zambia but after definitions and an explanation of key terms, extra slides on the hippopotamus metaphor were introduced. It was then explained how African students were wary of them and why. In groups students discussed the key traits of the animal and the class were asked to give ideas and begin a discussion of how they would deal with it. Initially students explained avoiding it would be the best approach, but on questioning if they should avoid researching anything with subjectivity, they came to the understanding this would mean avoiding many forms of educational research and incompatible with an educational doctorate. The discussion then moved to planning for hippos. Students decided the first stage was to inform people there were hippos

in the vicinity. These included signposts and verbal conversations with people nearby. There was a general realisation that personal bias could be treated the same way. A critical point was realising that not informing the community could have worse consequences than letting people know it was there. A revisit of the key traits of the personal bias and subjectivity by exposition allowed the students to identify the key traits of bias and positionality in their own research and the session summarised with Rokeach's four personal values (1972) as a framework within which they could reflect on their own positionality.

After the class the focus groups were re-formed and asked to consider: If they understood the concept of personal bias? How might personal bias affect their research and findings? Would identifying your personal bias improve the outcome of your research? Did the metaphor of dealing with the Hippopotamus help their understanding of how to deal with the concept of personal bias?

The results from the UK students showed they all felt the Hippopotamus metaphor had helped them to understand the importance of identifying and critically reflecting on their bias, positionality and subjectivity. The groups explained they now realised this added to their research rather than detracted from it. The point of realisation was the fact that ignoring the hippopotamus could have consequences to others. Thus educational research might be very dangerous without very clear consideration bias and its impact, not least to the research subjects themselves (Sullivan, 2011). There was some surprise and humour amongst students that the Hippopotamus was such a dangerous animal, which might have added impact. One student commented "I thought they were cuddly things." Students said they realised personal bias was not something they should ignore or try to hide and student A reported:

"Maybe it was the hippo, it helped me to realise there were more dangerous things than reflecting on myself.....the idea (the hippo metaphor) helped me understand ignoring my own position was more dangerous than dealing with it."

There was a general recognition at the end of the class that identification of personal bias was not a weakness but a strength in their research as student B said:

"If suppose if I reflect carefully, other people reading my work won't be able to comment that it's just my opinion which I've supported by finding articles."

A number commented they understood the need to reflect critically on their own position and personal bias and now accepted this added depth and clarity to their

research. They felt early planning to include bias identification and reflexivity in their methodology added quality and perspective to their approach. Student C commented:

“The more I think about it the more important it seems to become a key aspect of good research. Why didn't I know this before?”

This class was much easier to run than previous classes on the topic. On following up the class with dissertation supervisors it was reported that students were asking questions about how to apply critical reflexivity to their studies in supervision sessions.

Toward the end of the focus group students began to consider the ways they might reflect rather than if they should reflect. Questions concerned the number of reflections in a dissertation, where to reflect, and how deep the reflections should go. Student A asked “If I do too much it might affect the detail of my dissertation so is there a word limit?” and student E inquired “Should I do a full reflection at the end of each section of my dissertation?” By the end of the focus group students felt capturing reflections as they went along by a method of their choice was the best way to be critically reflexive. Reflective logs were the most common suggestion. Discussions with dissertation tutors indicated this brought about a number of individual preferences such as critical journals running alongside the dissertation, a reflexive chapter in the dissertation and a series of statements on reflexivity at set stages using Rokeach's Personal Values. This type of discussion therefore may be useful to summarise taught session and used in future classes.

Using metaphors as an aid to the understanding of personal bias and subjectivity to promote critical reflexivity in research can be underpinned by theoretical concepts. Transitional learning (Illeris, 2007, Wildemeersch and Stroobants, 2009), shows how learning in one place is used in a different place or different context. Mezirow (1997) discusses transformative learning where people reflect on a situation and use this to build new beliefs or opinions. Illeris (2014:148) defines transformative learning ‘as transformations of meaning, perspectives, frames of reference, and habits of mind.’ The difficulties in teaching critical reflexivity may require an impersonal example or object such as a metaphor away from the research to stimulate a discussion in order to overcome the existing belief that self-critical reflection damages rather than supports research. Hoggan (2014), directly links transformative learning to metaphors. Hoggan, in a study of breast cancer sufferers, discusses how difficult to explain feelings and concepts were used to help understanding of the patients' condition. Patients would give their disease a name or relate a story on being told of their situation. He also explains how humour was helpful to people in explaining

concepts which patients found difficult to explain normally. The use of a metaphor combines these features and probably helped challenge beliefs brought about by the position of the researchers at work in a safe and non-confrontational way.

Reflections on the Research

Good research demands tutors practice what they preach (Griggs, 2011, Makay and Tymon, 2013)) and being critically reflective is an appropriate approach here. The two classes were of a slightly different nature in terms of outlook and culture, and in each case supervisors reported an increase in the use of critically reflective frameworks over previous cohorts. In the case of the researched class in the UK dissertations were still formative at the time of reporting and the effect of the metaphor may not be fully obvious until the end of their doctoral programme. The decision to obtain reports from supervisors about critical reflexivity in student work as soon after the class as possible may appear to lack depth, but it was felt this would give a more accurate picture of understanding than a thematic exploration of student dissertations which may take years, be incomplete and would undoubtedly include learned experiences from outside the session as part of their epistemological journey.

There are arguments that metaphors do not always contribute to understanding as they do not reflect the reality of practical situations (May, 2010), and therefore may have limited use in aiding conceptualisations, yet in the example reported here the topic was easier to teach- a fact worth reporting in itself - and, as reported above by dissertation supervisors there was a reported increase in the understanding and application of critical reflexivity in the students research. The underpinning conceptual models may also be subject to scrutiny. Illeris (2014) notes Mezirow himself accepts there are more elements to transformative learning than reflection on beliefs. Illeris points out that emotions and social relations are included in Mezirows' later work but this too may have helped the relational understanding of this metaphor to personal bias as students were surprised about the animal being seen as highly dangerous.

The research was undertaken by the tutor as an insider in the study. While not directly belonging to the student group the researcher was the tutor, in a position of power and a member of the extended group, which in itself is a powerful position. This has advantages and disadvantages (Unluer, 2012). Advantages as an insider gave access to the group after due ethical processes and permissions. The knowledge of previous classes helped gain a perspective on the teaching approach, and provided access to dissertation supervisors for follow up information. However as an insider the tutor researcher will always have a power position which mean subjects are

exposed to this (Blass, 1991). For example students may give the answers they think the researcher wants to hear. Subjectiveness is also a strong consideration when the researcher is researching their own classes and therefore critical reflexivity is an important part of the research method.

To cope with these using the Rokeach Personal Values Framework (1972), advocated during the lessons, is helpful to identify the authors position. The morality of this situation is that it is right to reflect on and report practice in the classroom and this was a considered reflection of the practice rather than an investigation of the students. Competency to do the research is somewhat subjective also but this was undertaken by a trained researcher in the subject area and the method is considered. Personal values include personal objectives and publication of this paper only became an objective after the second class in the UK reported positive results and showed students were attempting to reflect earlier in their research than normal. An advisory presentation to the academic community in 2015 (Gazdula, 2015) showed there was interest in the research and the research approach was acceptable. Social behaviour includes political and educational beliefs. Transnational studies are difficult to reconcile due to many variables in culture, societal concerns, political and personal pressures. However cross-cultural examples producing improvements in the educational process and learning are in themselves exciting and worth reporting though the opportunities to do this are always limited. These therefore should be investigated and advised upon when they occur.

Conclusions

Critical reflexivity is a difficult concept to teach, learn, and measure for understanding, yet is important to a qualitative study methodology. This applies to all students of social science including doctoral ones. In the case of the education student researchers observed in this study, their professional backgrounds embedded a deep belief in avoiding self-criticism and an unwillingness to reflect critically on their own position generally. This is transferred into their research approach as they sought to be apart from the research and attempt a positivist approach giving absolute truths. This is generally compounded by a bewildering variety of approaches to teaching or learning personal bias, subjectivity and critical reflexivity including ignoring the topic. However Mackay and Tymon, (2013) argue that contemporary learning theories should be taught and where possible demonstrated in practice. The difficulties in teaching critical reflexivity are well reported as highlighted earlier and research showing successful approaches should therefore be reported academically.

The use of analogies and metaphors are widely reported in teaching but less prevalent in postgraduate studies, but this research shows they have value here as well. The search for appropriate metaphors may be best done within the students own experience, as Hoggan (2014) describes with his patients. This was the case in Africa but some insights are capable of translation across boundaries. An important part of this seems to be where key features align easily with the concept being studied or where deep-seated beliefs of learned experience may exist to hinder understanding of the concept. This in itself may be worthy of further research. In this study, the idea of personal bias and subjectivity as something hidden but dangerous aligned well with the Hippopotamus, and the creature is well enough known in most countries for people with little chance of an encounter to understand the dangers when explained, even if this caused some surprise and humour. The real knowledge was gained in working out the ways to deal with it and this where the realisation came from. Advising the community in the vicinity of an approach translated directly into advising of bias and positionality and the Rokeach Personal Values Framework (Greenbank, 2003) gave an easy model to begin reflexivity. There are other frameworks and these may also prove useful in guiding student approaches. This approach contrasted with previous approaches to teach the topic, which were more instructional, and consisted of a lecture and discussion. Sfard (1998) argues that metaphors avoid theories being transformed into instructional prescription which are 'the worst enemy' (Sfard, 1998:13) for successful understanding. They work because they are accessible, flexible, imaginative and have aesthetic value.

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Ethics Statement

This article followed the ethical requirements outlined under the University of Bolton's ethical policy for Human Subject Research (HSR) and was approved by the Educational Ethics Research Committee.

<http://www.bolton.ac.uk/Students/PoliciesProceduresRegulations/AllStudents/ResearchEthics/Home.aspx> (18/1/2017)