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Action research: a wonderfully uncomfortable mode of creating knowledge

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Changed views on the nature and purpose of knowledge production provide the backdrop for the authors' demonstration of the ways in which action research on the development of general skills transformed their values into a living theory. This paper recounts how action research was used to integrate general skills into a medical curriculum. It also presents evidence of the critical scrutiny to which the first author's educational practice was subjected. The distinctive features of action research provide an analytical framework for arguing that an action researcher can produce useful knowledge and so certainly can have a "scientific message".

Aksienavorsing: 'n wonderlike, maar ongemaklike manier om kennis te verbreed

Veranderde sienings oor die aard en doel van kennisproduksie vorm die agtergrond waarteen die outeurs demonstreer hoe aksienavorsing hul waardes rakende die ontwikkeling van algemene vaardighede in 'n lewende teorie omvorm het. Die integrasie van algemene vaardighede in 'n mediese kurrikulum deur middel van aksienavorsing is aan die orde in hierdie artikel. Bewys word gelewer van die kritiese ondersoek waaraan die eerste outeur se onderwyspraktyk onderwerp is. Die eiesoortige kenmerke van aksienavorsing dien as analitiese raamwerk waarbinne aangetoon word dat 'n aksienavorser bruikbare kennis kan genereer en dus inderdaad 'n "wetenskaplike boodskap" het.

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The phrase "wonderfully uncomfortable" in the title is borrowed from Mills (2000: 3).[1] He describes action research as an ongoing, creative activity that has a tendency to surprise the researcher. The paradox in our title signifies that there is no way of predicting how an action research investigation will end, which makes the journey uncomfortable. At the same time, however, it also signifies that there are wonderful rewards for the researcher who is willing to learn the craft of being critical of her own (often imperfect) circumstances in a subjective, yet rigorous manner.

Discomfort can begin immediately the action researcher starts analysing and discussing her own writing reflexively. The attempt to explain to others how she has managed to "make meaning" from what she has learnt is uncomfortable because some scholars see such reflexive talk as self-indulgent, narcissist and tiresome (Pillow 2003: 176).

For us, the authors of this paper, the decision to use an action research design for the doctoral studies of the first author (AAB)[2] was indeed an uncomfortable one. First of all, all of us had been educationally "brought up" in an environment of traditional scholarship. Such an environment is one where "claims to knowledge are made and legitimated through careful statistical analysis to demonstrate the logical consequences of causal relations" (McNiff 2002b: 5 of 13).

The decision to adopt a personal, autobiographical reporting style exacerbated the discomfort. The researcher's natural inclination was to choose the aloof style of an objective researcher, offering a "view from nowhere" (Hoy & McCarthy 1994: 251). The conventions of action research as a form of qualitative social inquiry, however, dictate that a research report should have a personal dimension. In this view, a narra-

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2   Although the first author (AAB) was, in the true spirit of action research, at the centre of the research, the message of this paper is as much that of the other two authors, who acted respectively as supervisor (EMB) and co-supervisor (HRH). Many of the ideas, developed collaboratively with the project team and other participants in the research project, were discussed and deliberated with these two co-authors prior to implementation.

tive, autobiographical style helps to make the research more accessible, realistic and practically useful to other practitioners (Vulliamy *et al* 1990: 20). The challenge thus was to maintain a balance between explicit analyses of personal experiences and autobiographical, self-indulgent accounts of the first author's involvement in the research.

The sense of discomfort became acute when one of the examiners of the thesis questioned whether the study had extended the boundaries of knowledge. The examiner's report affirmed the first author's substantial efforts and consistent, long-term investment in her action research programme. It fully acknowledged that she had developed a coherent argument which made sense of many of the complexities of the data; that the teachers and students involved in the curriculum design initiative and accompanying assessment innovations had benefited substantially in terms of improved practice; that she had displayed, over the stages of the action research cycle, a sound and progressively more sophisticated understanding of the challenges facing innovators in the field of curriculum design and assessment; that the research had identified certain important aspects of the struggle to implement a progressive educational policy against the backdrop of well-entrenched traditional academic views governing the parameters of how learning and assessment should take place. However, the same examiner expressed concern that the choice of an action research design may have inhibited the significant contribution to new knowledge that the study could have made. There were two main objections to the design. One was that the research focused on charting the development of the practitioner's knowledge within her own current practice. The other related to a doubt that full account had been taken of the state-of-the-art research in the area of interest.

One could view such a comment as simply another example of the prejudice that becomes evident when action research is evaluated according to the well-established epistemological conventions and methodological framework of positivistic/objective research. But that would be to miss an opportunity to help others see that action research is not a "soft option" that fails to contribute to new knowledge. In this paper, we wish to show how this particular study, which sought to improve practice, met the challenge of being far more than mere engagement in spontaneous reflection on day-to-day action. It also foregrounded the need for action researchers to provide insights into how they produce knowledge.

Paradoxically, the discomfort was wonderfully rewarding. As a team (researcher, supervisor, and co-supervisor), we derived unrivalled fulfilment from producing evidence (during the course of the research and also in this paper) that, as higher education practitioners, we had had the courage to transform our earlier ontological values and epistemologies to contribute to a new, twenty-first century knowledge base for professional teaching.[3] Reflection on the study and on the examiner's comments helped us reach two conclusions.

First, it became clear that perceptions on what constitutes useful knowledge have undergone a radical change in recent times, as universities are increasingly urged to move beyond exclusionary gatekeeping practices of deciding what counts as knowledge and whose knowledge is valid (Barnett 2000: 35-46).

Secondly, we gained confidence in our view that a contribution to knowledge might not only broaden or extend knowledge, but also deepen and transform knowledge related to the researcher's immediate work environment (Grønhaug & Olson 1999: 7). "Transformation" of knowledge in the case of the first author's PhD study refers to insights gained into general skills development which were not available when a new curriculum was introduced in 2000 in the School of Medicine at the University of the Free State.

This study does not profess to contribute to knowledge beyond the limits of the paradigmatic boundaries suggested by action research methodology. What the study does claim, however, is that in higher education as a field of study, there is room for relational practitioner knowledge that could contribute to the creation of a better reality. "Better reality" in this particular case refers to the redefinition of the relatively narrow boundaries that were set for the development of general skills when the new curriculum was first introduced.

3   This knowledge base for the teaching profession would be one that is informed by professional debates among teachers on what they are doing to encourage learning and to achieve their educational and social goals.

1. Perspectives on the generation of knowledge

During the post-thesis reflective dialogue on shortcomings that could possibly have restricted this PhD study's claim to knowledge contribution, we came to the conclusion that the parameters of what counts as valid, scientific knowledge are difficult to define because of the multidimensionality of the concept. A cursory overview of the literature offers valuable insights into the generation of theory.

1.1 The what: an epistemology of knowledge "out there"

Up to the twentieth century, educational theory mostly took the form of propositional knowledge about teaching, generated by philosophers and sociologists (Straughan & Wilson 1987: 297). This means that the body of knowledge that informed educational practice was an accumulation of abstract ideas produced by people who were not necessarily professional educators themselves. Such a theoretical base refers to a set of propositions which are stated with generality, but also with sufficient precision to explain the current "behaviour" of phenomena and predict future behaviour (McNiff 2003: 5).

According to the view that valid theory exists only in propositional form, a competent educator would be one who studies conceptual theory generated by other "experts out there" and applies it to her own practice. This requires the researcher to describe and explain her teaching practice as an objective phenomenon, demonstrate achievement of a rational understanding of the phenomenon under scrutiny, and take rational action based on expert knowledge in terms of her own practice (McNiff 2003: 6).

Propositional theory dominated educational practices for many years. Remnants of that situation are still visible today whenever action research is perceived as "unscientific" on the grounds that it does not contribute to "new" knowledge.

1.2 The how: a reconceptualized view of knowledge production

In more recent times, the hegemony of propositional theory has been challenged by so-called "soft science" approaches. The new way of thinking is premised on the idea that epistemological biases should no longer

be tolerated in educational research (Stacy & Spencer 2000: 498-9); that learning and understanding involve not only the internalisation of a body of rational knowledge, but also the explicit sharing of personal knowledge (McNiff 2002b: 3 of 13).

Contemporary debates about the nature and purpose of education in relation to social evolution, for example, propose a new mode of knowledge production for meeting the changed requirements of an evolving civilisation. One such requirement is an understanding of, and a rapid, flexible response to complex problems through the generation of Mode 2 knowledge (Gibbons 1998: 4-6). Since a discussion of Gibbons's model of Mode 1 and Mode 2 knowledge falls outside the parameters of this paper, suffice it to say that Mode 1 knowledge is propositional and based on traditional notions of the objectivity of scientific knowledge. In the current knowledge environment, sound scientific practice requires, among other things, the production of knowledge within the context of application (Mode 2 knowledge). Such knowledge is relational, which means that it helps to build a good social order. The latter presupposes that those who are engaged in constructing it should be accountable for what they do (McNiff 2003: 9).

Social accountability in higher education refers to the willingness of educational practitioners to look critically at their own practice and make changes in the best interests of the students they teach. The outcome of such personal enquiry encompasses more than "common sense" and qualifies as knowledge when validated evidence can be produced of how espoused educational values were transformed into "living standards of practice and judgement" (McNiff & Whitehead 2006: 73-4).

These new requirements are in sharp contrast to erstwhile deeply-held beliefs about the generation of reliable knowledge. As Reg Revans (1991) argued in his famous equation of learning: the goal, in times of turbulence and transformation, should not be to "fix something that is broken" by applying expert knowledge, but to understand how it came to be "broken". It is thus not the idea that knowledge of a transformational nature should supplant traditional, propositional knowledge, but rather that they will increasingly operate in harmony (Gibbons 1998: 4-6).

1.3 The why: three different interests in knowledge

In trying to unravel the rationale for creating knowledge, we found Lovat & Smith's (1993: 87-8) conceptual framework for educational outcomes particularly useful. According to this framework (based on the work of Habermas), knowledge is sought in response to different interests, including an interest in knowledge to control (Type 1), to communicate and understand (Type 2), and to emancipate (Type 3).

Knowledge that enables people to control seems to be of an empirical, technical and conventional nature. Typically this would be the kind of knowledge that leads to improved principles, methods and techniques to strengthen the phenomenon under investigation. Habermas's (1972: 180-1) second area of cognitive interest relates to reaching an understanding of phenomena by finding meaning, taking different viewpoints and communicating interpretations. This hermeneutic understanding is individual in nature and cannot be subjected to a single standard or value. A third area of interest in knowledge encompasses personal responses to, and insights gained through reflection or challenging experiences (Habermas 1972: 197-8). An important attribute of this kind of knowledge is that it results in change, development and transformation. Such knowledge is sometimes devalued in academe, particularly in the "hard" sciences (Marton *et al* 1993: 293), because it is regarded as too personal and individual to have any predictive power. Advocates of this kind of knowledge, on the other hand, argue that the role of emancipatory knowledge in extending the boundaries of what is known should no longer be overlooked (Toohey 1999: 46-7). When researchers feel that the dominant theory cannot explain their own experiences, they should recognise this as the impetus for new explorations (hooks 1994: 67-75).

In Habermas's (1972: 198, 210-1) view, the drive to produce emancipatory knowledge is linked to the human desire for freedom — the need for human beings to investigate their own experiences and to understand the forces that shape responses, so that ultimately they may make more considered choices about the ways in which they choose to be and to act.

2. Distinctive features of action research

The search for new knowledge is clearly no longer exclusively dependent on objective, academically detached, socially neutral inquiry, using survey and experimental methods that produce a comforting quantification of findings (in other words, positivism). It is increasingly recognised that a researcher can also accurately observe, describe, question, listen, analyse and interpret by following post-positivistic approaches. A typical post-positivistic view of science is expressed by Polkinghorne, cited by Kvale (1992: 5-6):

> … the creative search to understand better, and it uses whatever approaches are responsive to the particular questions and subject matters addressed. Those methods are acceptable which produce results that convince the community that the new understanding is deeper, fuller and more useful than the previous understanding.

Action research fits this description perfectly. It is flexible in its methodology, yet never either haphazard or routine. Not working to a fixed formula does not spell methodological lawlessness (Dick 2002: 166). On the contrary, it is only when evidence can be produced that the conventions governing action research have been employed, that an action researcher can claim to have undertaken an enquiry that is essentially different from other forms of experiential, reflective or action-oriented approaches such as classroom observation, applied research, strategic action or spontaneous reflective practice (Tripp 2003: 4-5 of 23).

In order to judge whether the study under discussion met the criteria of action research, and may thus be acknowledged as having extended the boundaries of knowledge, the pragmatic features of action research as described by McNiff *et al* (2003: 18-33) were used to provide the analytical framework.

2.1 Action research aims to improve the pragmatic situation

A primary feature of action research is that it aims to improve the learning and educational growth of those participating in the endeavour (McNiff *et al* 2003: 19). It is driven by a central value, namely respect for others, which explains the focus on an educational practitioner who asks: How can I help you to learn by improving what I do?

The context of the research reported in this paper was a module on general skills (Module MEA112) which forms part of the Programme for Professional Medicine (MB,ChB), an undergraduate learning programme for first-year medical students in the Faculty of Health Sciences at the University of the Free State. When the School of Medicine adopted a new, outcomes-based curriculum in 2000, the first author was given the brief of preparing medical students for its demands. This involved helping them become proficient in general skills such as communication, group work and information technology. At the outset, it was anticipated that some students would have serious inadequacies in these areas. Others would be likely to be negative towards the reinforcement of skills they had acquired almost automatically during their privileged school career. Furthermore, it was assumed that most lecturers teaching in the programme would find themselves in an implementation vacuum as far as the assessment of general skills was concerned. On the one hand, it was acknowledged that summative tests and examinations were not appropriate ways of "measuring" the acquisition of skills. On the other, barriers such as resistance to change and the substantial demands on lecturers' time and resources would restrict the implementation of innovative assessment methods and techniques. This dichotomy between the need to teach general skills, on the one hand, and resistance to changed assessment practices, on the other was a central concern in the research.

Working towards overcoming this dichotomy within an action research framework represented a move towards the professional accountability called for by the scientist-practitioner model of social research in the caring professions. According to this model of professional research and practice, practitioners' practical experience, close proximity to the phenomenon under scrutiny, and professional commitment to effective practice put them in an ideal position to develop scientific knowledge (Delport & De Vos 2002: 59-60).

Once a suitable context for the research had been determined, a commitment to improving existing practices was made. It was agreed that the module on general skills would serve as a "laboratory" in which the first author would experiment with innovative forms of teaching, learning and assessment aimed at achieving the goal of student-centredness. In effect, this meant that new instruments and alternative strategies for assessing general skills were developed. Students were prepared for

more educative forms of assessment by gradually being involved in the process of self-, peer- and co-assessment. Staff members responsible for core learning benefited from the planned changes by being given opportunities to embed the assessment of critical outcomes in the subject matter of the modules they taught.

2.2 Action research asks a special kind of question

Although precise questions and clarity on how they will be addressed are not a prerequisite at the beginning of action research, a project commonly starts with a question indicating that the researcher has some kind of educational agenda (McNiff *et al* 2003: 19). The fundamental goal of action research, namely improved practice, and thus the researcher's readiness to be self-critical, are usually demonstrated by a research question that starts with the words: "How do I/we…?"

At the outset, we agreed on the following questions as an organising framework for the research:

- Why did the UFS School of Medicine opt for a certain course in terms of skills development?
- How did those responsible for implementing policy intentions do so?
- What was done?
- What was the outcome of the actions taken?
- What lessons were learned?

In the first place, these questions demonstrated the first author's awareness of her relation to others working with her in the new curriculum. In the second place they gave direction, not only to many work-in-progress discussions with colleagues and management, but also to discussions among the co-researchers. The aim of action research, however, is to assume responsibility for self-improvement. The awareness of this responsibility became increasingly visible as the questions that directed the research were more narrowly focused in each cycle.

The primary focus of Cycle 1 (1999-2000) was to justify the actions the researcher had planned in order to give effect to the critical long-term outcomes considered by the South African Qualifications Authority (SAQA) as essential for ensuring that the values of a democratic society are preserved. The following questions were asked: What was

the rationale for creating the current model of skills development? What is the status quo in the core modules for the teaching and assessment of critical outcomes? What should change? How can students be persuaded to accept new forms of assessment? How can the first author, in her capacity as the leader of the module on general skills, contribute to decreasing the workload of those responsible for implementing new forms of assessment in core modules?

In Cycle 2 (2000-2001), accountability to the students and the faculty was demonstrated by responding to the following questions, which directed a community-based project: Can student marks be trusted? What benefit was derived from the participation of community health workers and pupils? Do students feel positive about their status as co-assessors? If not, what modifications need to be made? Overall, was the authentic assessment exercise worthwhile (to the students, the lecturers and the community health care workers)?

In Cycle 3 (2001-2002), when it became clear that most of the difficulties that arose in skills teaching related to assessment, questions focused on modifications that were well within the first author's control as leader of the module on general skills: How can peer- or co-assessment be used to produce reliable results? How can the problem of over- and underscoring be overcome when using peer- or co-assessment? How can individual and group assessment be integrated?

These questions reflect an internal commitment to detecting and changing outdated educational theories in use. This kind of commitment is concerned with the subtle and unique details that cannot be measured solely by standardised scales. Knowing the overall impact of innovative assessment practices on first-year students' academic performance, for example, would have been of little use to the leaders and decision-makers in the School of Medicine. What was necessary at that point was information that would help them to manage the complex problems related to curriculum change. They thus needed to understand the particular problems of giving students increased responsibility for their own learning — not just the products of involving students as co-assessors in the module on general skills, but also details about the process of sharing the responsibility for valid assessment in terms of nuance, setting, interdependencies, complexities and context.

2.3 Action research puts the "I" at the centre of the research and influences broader social contexts

The autobiographical style of the thesis under discussion is in stark contrast to conventions in the "hard sciences". The reason academics traditionally avoid saying "I" and "we", argues Brown (1994: 105), is that

> … it creates an impression that the words are written by some unseen observer who is at arm's length and therefore objective, rather than somebody close by who is presumably subjective.

What is valued in action research, however, is not objectivity but rather the encouragement of others in the immediate context to participate in bringing about change. Therefore, an action researcher writing in the first person reveals a willingness to accept responsibility for words and deeds, and to make the work more accessible and practically useful to other practitioners (Vulliamy *et al* 1990: 20).

The first-person style should not be interpreted as self-contemplation. The influence of 'I' in creating social change, as McNiff *et al* (2003: 20) argue, may be considered as limitless:

> …'I' can influence others in my immediate context who in turn can influence others in their contexts. […] Collectively, individuals can generate world-wide change.

In keeping with this view, influencing others to the benefit of students was a priority in this study. In Cycle 2, for example, the questions that governed actions and observations reflect such an intention: "How can I persuade students to accept new forms of assessment? How can I collaborate with subject experts to enhance embedded skills development and assessment?"

The first author set out to share newly-gained insights with influential members of the School of Medicine, and thus to influence the broader educational context. This was evident on several occasions when she disseminated ideas on the integration and assessment of general skills (Beylefeld & Jama 2002: 113-21). At one meeting, for instance, she learned from the attendees' comments that few of them had even considered the use of unconventional forms of assessment to ascertain whether skills and attitudes had been mastered. This gave rise to the following self-reflective question:

> How can I, through the experience I am gaining with the integration and assessment of general skills in Module MEA112, help to achieve the overarching aim of the new learning programme for first-year medical students, namely to foster the development of lifelong learning skills and independent learning? (Beylefeld 2002: 141-2).

One of the actions taken in response to this question was to encourage collaboration between staff teaching subject content and skills development specialists. Influencing others is one of the forms of knowledge creation embodied in action research. McNiff (2002a: 8 of 28) makes this point as she argues:

> There is nothing sinister in the idea of influence, and everything to celebrate; most ideas that people have were influenced by someone else, somewhere else in time and space. This is the way that knowledge evolves, a process of learning from others and reworking existing knowledge in new ways.

2.4 Action research involves informed, committed and intentional action

Before spontaneous reflective practice can become praxis, elements of informed, committed and intentional action should be present (McNiff *et al* 2003: 21-2). This implies, first, the presence of a strong conviction that things could be better and, secondly, a commitment to one's own values as well as the recognition that one may be mistaken — thus, openness to other people's points of view.

That educational values and a desire to contribute to the general social good provided the driving force for the research described here, rather than a selfish desire to further only the researcher's personal ontological development, is evident in the thesis under discussion. Accountability towards the Health Professions Council of South Africa (HPCSA)[4] and the community at large, for example, provided the impetus for pursuing a sophisticated understanding of the aims of skills development in the first year of the Programme for Professional Medicine (MB,ChB). It also gathered research-based evidence that the particular skills-building model used by the UFS School of Medicine

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4   The Health Professions Council of South Africa (HPCSA) is the professional body responsible for quality assurance in medical education, through its Sub-committee for Undergraduate Education and Training.

indeed fosters life-long learning, as prescribed by the HPCSA. A responsibility towards students was demonstrated by the incorporation of their views on their perceived skills-learning needs and the relevance of skills acquisition as an educational experience. Similarly, responsibility to the staff was demonstrated in the intention of improving their educational environment by minimising the impact of skills development on their workload.

Throughout the thesis, the researcher's commitment to encouraging collaborative practices and creating cultures of enquiry is evident. In reflecting on the results of a quantitative analysis of the pattern of mark allocation in Module MEA112, for example, she noted how she had shared with colleagues the idea of not relying solely on figures when looking for quality in a new assessment system. Becoming critical should also include "going into the minds of students" by means of qualitative methods of assessment.

On several occasions deliberate action was taken to bring about desired changes. In Cycle 2, for example, a proposal to approach the leaders of core modules and to assess their needs and expectations as far as the development of general skills within their respective modules was concerned was tabled at a meeting of module leaders. The matter was then discussed at the curriculum committee level, whereupon permission was granted to the first author to interview core module leaders.

Committed and intentional action, however, never compromised the researcher's willingness to question her own motives, to suspend her own judgements and to remain open to other people's points of view. As early as the first research cycle, there is evidence of self-reflective critique when she wrote:

> Furthermore, my collective engagement with the staff members who were co-workers in this endeavour, brought the realisation that knowledge is uncertain and personal. This insight came when I was confronted with the wide variety of interpretations of what should be included in the module on general skills (Beylefeld 2002: 176).

In reflecting on her changed understanding of general skills development, the first author acknowledged the role of critical input generated at workshops and retreats organised by the School of Medicine for the professional development of lecturers teaching in the new programme. In keeping with the view that new knowledge can be generated through

dialogue with others who are equally interested in the process of learning (McNiff 2002a: 7 of 28), such occasions served to create a powerful professional learning context.

An example of open-mindedness is to be found in Cycle 3 when it was decided to bring in student journal entries as a form of reflection at the end of each skill session. The inclusion of journal writing in the daily programme was based on a claim in the literature that reflection is a valuable learning strategy in the education of the healthcare professions. Negative feedback from students, however, indicated a mismatch between the intended outcome of the activity and the students' experience of it.

The researcher's capacity for critiquing her own decisions became apparent when she related how her arrangement with students to hand in their journal entries was strongly criticised at a workshop on undergraduate teaching, learning and assessment. The facilitator of this workshop, Professor Lewis Elton from University College, London, recommended that students should instead be allowed to decide what they wanted to share with others. This recommendation was in line with the questionnaire response of one of the students: "It is something personal that I am expected to write down — then one will not be honest, because you know somebody else is going to read it."

In her research diary entry on this matter the first author confessed that she had ignored the fact that the reflective process involves both cognition and feelings, and that she had violated the students' personal space and thus defeated the purpose of the journal-writing activity as a learning event.

2.5 Action research should have epistemological and methodological rigour

According to the McNiff (2003: 22) model, the scientific value of action research is located in the researcher's changed understanding of her practice, and especially in her understanding of how this change has come about. Meeting such a criterion demands, first of all, that the action researcher explains and justify her core assumptions about epistemology, ontology and human nature. Furthermore, insights derived from a single instance of action (in this case, a module on general skills) can only

be trustworthy and persuasive in the eyes of others if the researcher turns data into evidence by adopting a rigorous methodology; the continual and often incoherent process of adjustment and review has to be communicated in a coherent manner (McNiff 2002a: 10 of 28). Ultimately, action researchers stand a better chance of having an impact if they refrain from making grandiose claims on the basis of the new understanding that has emerged.

2.5.1   The researcher's epistemological stance

In the thesis under discussion, the researcher gave a comprehensive theoretical perspective on action research as a form of applied educational inquiry. This acknowledged the need to clarify what would constitute good information and valid results in relation to the chosen unit of analysis.

After having studied the various research approaches within the alternative dialectical paradigm of social science research as described by Winberg (1997: 16-31) and by Vulliamy *et al* (1990: 7-16), the critical-interpretive and holistic approaches of action research to social reality were chosen to form the theoretical framework for the study. According to this paradigm, knowledge which justifies practical action is not just the knowledge of principles, but also a kind of personal knowledge based on the views and interpretations of the people involved in the inquiry.

The critical dimension of the approach provided the researcher with a "license" to collect evidence and evaluate experiences within a spiral of micro-level curriculum development. To justify the belief that knowledge is "made" when people talk about and explore their personal experiences, the researcher drew on the work of Carr & Kemmis (1986: 43-4) in seeking out the relations between old and new educational knowledge. The following excerpt from her research diary demonstrates how a group interview with lecturers teaching core modules served to counterpose rhetoric and reality:

> From the comments that were made, I came to the conclusion that […] the use of unconventional forms of assessment to ascertain whether skills and attitudes had been mastered was not even considered by most of the individuals attending the meeting; that practices dominating assessment in the majority of modules seemed to contradict the aims of a student-centred, outcomes-based approach [, and] that student-centred teaching in the new curriculum was little more than the proverbial new wine in old skins (Beylefeld 2002: 209).

The interpretative character of action research, in turn, dictated a focus on interpretation in context, rather than on generalisation and the discovery of universal laws. Drawing on Copley's (1994: 13) work on holism, the researcher claimed her right and justified her epistemological decision to include all evidence in order to make her work persuasive. Evidence included measurable data (quantifiable questionnaire data and attitude scales), document analysis (official documents and field notes), data of expert judges (formal and informal interviews with the academic staff members and the School's management team), reports of 'inner explorers' (co-developers of the module and co-researchers) and self-reports of subjective experience (personal diary entries).

The epistemological "discomfort" of the authors was exacerbated by the fact that, in addition to the conventions of qualitative research not being as straightforward as those of the quantitative survey and experimental research traditions, there is still disagreement on certain key issues in the discourse about action research. A clear understanding of, and an explicit positioning in relation to issues such as the action research cycle, the need to review the literature, the collaborative nature of action research and its emancipatory aspirations thus had to be achieved at the outset of the study.

With respect to the perception that slavishly following the action research spiral constitutes doing action research, the researcher made it clear that she understood the action research process to comprise a series of cycles, but emphasised that each round incorporated a possibility for feedback of information within and between cycles. The fact that the research was eventually reported in the form of three chronologically distinct cycles did not detract from this oscillating process, as is evident from the cross-referencing that characterises her thesis.

As far as the desirability of a literature review in preparation for action research is concerned, the extreme version of the open-ended inductivist approach to qualitative research was rejected. In terms of this approach, the first author would have had to ensure that she was uncontaminated by prior concepts or preconceived ideas at the start of the research project by ignoring the literature on the area of study. Instead, the team decided to adopt the view of Mills (2000: 29), who maintains that reviewing the literature can help teaching action researchers to see their problem more clearly. In line with this view, although the

literature study had not been completed when the empirical part of the research started, the researcher did not start with a *tabula rasa*. The belief that she would be able to learn from how other researchers had tackled similar problems was clearly communicated:

> … I began with admittedly ill-structured, but nonetheless definite problems in mind, namely (a) how to put the teaching of general skills into practice in a medical curriculum; and (b) how to fine-tune my ideas, gathered from models reported in the literature, in order to strike a balance between what, according to my interpretation, should be done and what is practically possible within the specific context of the first year of the Programme for Professional Medicine (M.B.,Ch.B.) (Beylefeld 2002: 156).

In deciding whether it would be legitimate to conduct action research without involving a whole range of collaborators such as parents, community members and a group of researchers who help one another to understand what they observe, we took account of the views of Zuber-Skerritt (1994: 115) and Winter (1996: 20). According to these authors, action research may also occur in a situation where the others involved in the activity which the researcher is studying and seeking to improve are her collaborators insofar as they help her understand the activity and the outcomes of interventions. Participation and collaboration in the study under investigation were thus defined as involving the community of academics working on the implementation of Phase I[5] of Curriculum 2000. Whole-group workshops and Phase I meetings provided direction and guidance as to where the School was heading with the new programme. The core research group comprised members of the module development team and several individuals involved in core modules. Despite the members' different foci, partnership in the core group took the form of a community in which ideas were critically examined, experiences shared and outcomes analysed within the safe, supportive context of formal meetings and informal discussions.

Finally, the debate on whether technical and practical action research should advance to the level of critiquing the dictates of tradition, orga-

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5   Phase I is a term used to refer to the first year of the Programme for Professional Medicine (MB ChB) taught at the University of the Free State. The design and implementation of Curriculum 2000 was driven by steering committees for the various curriculum phases, which in turn were supported by input from working groups, each of which had to develop a specific aspect of the new curriculum.

nisational constraints and theories-in-use in order to have scientific value (Carr & Kemmis 1986: 98-9) was circumvented by following Perry & Zuber-Skerritt (1992: 206), who claim that the various levels of action research are not mutually exclusive; that the shift from technical, via practical to emancipatory action research is a process of gradual development.

A mixture of these levels is visible in this study as the distinction between practical and emancipatory action research became somewhat blurred. The research was practical because the questions directing the investigation arose from the issues, problems, concerns and needs that emerged as a routine part of the process of implementing the development of general skills in the "real world" of the School of Medicine at the UFS. The research was undertaken not only to reflect on, and gain a better understanding of identified problem areas, but also actually to alter some aspects in the course of the research. It was emancipatory in the sense that by experimenting with innovative forms of assessment, followed by critical reflection and informed, committed action, the first author emancipated herself from the habitual use of traditional forms of assessment. Ultimately, the research helped to create — albeit on a small scale — an atmosphere conducive to change and/or improvement of current assessment practices in the School of Medicine. Feedback gathered from top management,[6] for example, suggested that "success stories" had to be marketed to small, enthusiastic core groups and that proof had to be provided that innovative assessment could yield trustworthy results.

2.5.2 Methodological rigour

Benchmarked against the critical-interpretive epistemological features of action research as put forth by Winberg (1997: 16) and Vulliamy *et al* (1990: 19), the study under scrutiny met the standards of trustworthiness. In quantitative research the notions of validity, reliability and generalisability are used to signify trustworthiness. In the qualitative paradigm, these concepts are referred to as transferability, dependability and confirmability (Tesch 1990: 96). All these aspects refer to the researcher's ability to take all the complexities of the context under

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6   The top management team of the School of Medicine comprises the Dean and Vice-Dean of the Faculty of Health Sciences, the Head of the School of Medicine and the Manager of the Programme for Professional Medicine.

investigation into account, to gather data systematically and to make explicit the points at which learning took place. This view is also held by Krathwohl (1998: 230) who claims that it is only through the systematic monitoring of an action researcher's changed understanding that trustworthy research ensues. A retrospective overview of the researcher's approach to data gathering, analysis and interpretation shows that the action plans implemented were indeed supported by solid evidence.

First of all, what Vulliamy *et al* (1990: 88) refer to as "spending too much time floundering in the field and finally emerging with too little data for rigorous analysis" was avoided by certain measures. To ensure that mixed approach employing various data-gathering methods and techniques, Mills's (2000: 66) taxonomy of action research qualitative data collection techniques was used. To align the research process with the action learning cycle (plan-implement-observe-reflect-replan), the diagrammatic framework developed by Perry & Zuber-Skerritt (1992: 204) served to distinguish between core and thesis action research projects. An adapted version of the Lewinian action research cycle, as described by Kemmis & McTaggart (1988: 10-5), was used to structure fieldwork. To co-ordinate the planned series of data-collection tasks, the researcher again borrowed from Vulliamy *et al* (1990: 144) in plotting her operational fieldwork plan on a two-dimensional, three-column matrix of activities. Finally, to ensure that "real" action would be the outcome of the investigation, each round of data analysis and interpretation was approached with the following question as its point of departure: "On the basis of what I have learned from the current slice of reality, what should be done next?" The answer to this question, in turn, formed the basis for new, overarching action plans, which were plotted on various rough versions of a chart borrowed from Mills (2000: 115-7).

Throughout the three cycles the researcher tried to avoid bias by bearing in mind that, after having analysed a set of data, she might run the risk of becoming preoccupied with certain trends, and in subsequent sets of data subconsciously focus on those aspects of the module that she had *a priori* reason to suspect of being inadequate. She therefore deliberately tried to avoid missing other important but anticipated attributes of the data. As a research team we would like to believe that she succeeded in remaining unbiased, since she had no preconceived hypothesis to confirm or reject.

Judged against Lincoln & Guba's (1985: 300) criteria for trustworthy qualitative research, the results generated in the study may claim legitimacy. Table 1 provides a summary of the strategies and methods that were used to ensure trustworthy outcomes, permitting the researcher to make professional judgements about the quality of her new understanding of developing general skills.

Table 1: Adapted version of Lincoln & Guba's criteria for ensuring trustworthiness in qualitative research

Criteria of trust-worthiness upheld by the researcher	Strategies and methods followed to ensure that criteria of trustworthiness were met
Credibility	Observed students' perceptions of Module MEA112 consistently over a period of three years. Interacted with members of the development team of Module MEA112, lecturers teaching in Phase I of Curriculum 2000, as well as significant others (phase chairpersons, semester chairpersons, managers, moderator, supervisor and co-supervisors). Practised triangulation of assessors, sources of data (students, lecturers, managers), methods (questionnaires, interviews, observations), and perspectives to interpret data (statistical analysis within a qualitative action research mode of inquiry). Collected a variety of data items (self-reports, half-sheet responses, questionnaire responses, assessment results). Corroborated findings, summaries and reports with research participants before sharing information in broader forums such as meetings or workshops.
Transferability	Collected detailed descriptive data and compiled detailed descriptions of the context to facilitate comparison with other contexts.
Dependability	Compensated for a possible weakness in one data-gathering method by using more than one method (eg questionnaires and focus-group interviews).
Confirmability	Practised triangulation by confirming interpretations with those concerned. The researcher recorded her own reflections on what had happened in a particular situation so as to be able to reveal underlying assumptions or biases that led to a specific interpretation or caused her to present findings in a particular way.

3. Was the hoped-for "better reality" achieved?

McNiff (2001: 5) argues that, if a researcher wishes to claim that she has improved her practice to the educational benefit of others, standards of judgement should be established according to which the desired influence may be checked.

In a sub-section of the final chapter of the thesis, entitled "end-reflection", the researcher asked for her research to be judged as to the degree to which it had been successful in leading to improved practice. Table 2 is a summary of the evidence, showing that the researcher managed to adopt a stance towards her practice that integrated critical, ethical and transformational dimensions. In the process, she not only acquired technical expertise in developing students' general skills, but also engaged in dynamic professional relationships with other role-players who could potentially influence the quality of students' experience of general skills acquisition.

Although the word "prove" is not often mentioned in the discourse on action research, the above explication provides evidence that the first author's experiences with regard to the development of general skills were real and not simply "made up". The criteria and validating evidence entered on the matrix embodied her belief that she has influenced the context of general skills development in the School of Medicine for good. Such a belief, backed up by systematic evidence, is sufficient for making a claim to knowledge according to McNiff (2002a: 16 of 28).

4. The final question: what is in it for others?

After all the above has been said and done to prove the legitimacy of the study under investigation, the question remains: What did it yield that is useful beyond the case setting? In this regard, Cronbach (1982: 47-8) argues that extrapolation in the form of modest speculations on the likely applicability of case-specific findings to other similar situations can be particularly useful when based on information-rich samples and designs such as the study considered in this paper. Such extrapolations are logical, thoughtful and problem-orientated, rather than statistical and probablistic.

Table 2: Retrospective overview of how the criteria for action research
were met

Did I ….	Validating evidence
Demonstrate a critical attitude?	A thorough literature and documentary review helped me to understand the relationship between Curriculum 2000 and the socio-economic and political forces which demanded a change to a student-centred, outcomes-based higher education. Diary entries exposed the relationship between relevant theories in the literature and my subjective thoughts on what should be done to give effect to curriculum goals and to the purpose of present-day higher education, as explicated in the above-mentioned documents and literature. The interviews I conducted with academic staff members and the top management team helped me to appreciate the correspondence between the purpose of education and the policy decision to include general skills in the medical curriculum, on the one hand. On the other, I came to understand the disparity between stated curriculum goals and the reality of financial constraints, conservative attitudes, lack of time, resources and technical expertise.
Demonstrate a holistic, interpret-ative understand-ing of the reality of general skills development?	By generating student feedback on their experience of Module MEA112 after each round of implementation, and by reporting the most frequently mentioned complaints, I uncovered first-year medical students' understanding of general skills development. Throughout the research process I showed how my under-standing of student views influenced my own actions, within the specific context of the UFS School of Medicine. A holistic view was achieved by taking all evidence into account in evaluating the effectiveness and validity of the actions taken. The evidence included measurable data (marks given by lecturers and students, frequency distribution of responses), students' subjective opinions and self-reports on their experience of general skills development (open responses obtained in questionnaire surveys, presentations at lecturer training courses), interview data (focus-group interviews and in-depth interviews with staff and the leadership team), and the opinions of expert judges (the moderator's report and critical feedback from supervisors). Holism was furthermore pursued by showing how the process of skills development took account of the fact that South Africa's political past has caused some students to need more attention than others. This was done by taking action steps which made provision for this broader context (eg the im-plementation of a portfolio-based assessment system which makes allowance for formative feedback and flexibility in the time allowed for developing competence).

Did I ….	Validating evidence
Enhance the quality of my practice?	I did not consider that counting of the number of students who claimed to have benefited from Module MEA112, according to a standardized scale, was reason enough to maintain the original format and mode of delivery. Supplementary to quantitative findings, I concerned myself with detail, with subtle, unique factors (see evidence of student appreciation) and individual comments that nuanced the skills development experience. Such detailed observations cannot but lead to quality enhancement. The actions I took in each successive cycle were decision-driven, not hypothesis-driven. I did not, for example, hypothesise that a portfolio-based assessment system would cause students to be more satisfied with Module MEA112. Instead, I took a conscious decision to implement this mode of assessment because it held the promise of giving formative feedback to students and of increasing student self-awareness. According to Krathwohl (1998: 601), conscious decisions about the value and appropriateness of an action spell quality.
Collaborate with others in a participatory way?	Collaboration meant giving weight to the understanding of every contributor to the research in order to counterbalance my own subjective assumptions and interpretations. Evidence of having met this requirement includes: close collaboration with individual staff members teaching in core learning modules; the cognisance that was taken of directives from the curriculum management team and other key respondents; deconstruction of the contributions made by other team members working and by my co-researcher, Mpho Jama, and finally, the incorporation of expert advice from my supervisors in rewriting my thesis.
Contribute to emancipation of some kind?	The design and implementation of a module on skills development, *per se*, are emancipatory in nature because of the goal of redressing educational disadvantage through skills development. By showing how the concept of outcomes-based education is linked to arguments and pressure for wider access to higher education, the theoretical part of my work helped to develop a context conducive to change. The research also served to emancipate members of the MEA112 module development team and myself from the habitual use of traditional forms of assessment (to my shame, I must admit that a computer-based test on the content of Module MEA112 formed part of the assessment in 2001).

Did I ….	Validating evidence
	Judging from feedback from members of the School's management team, it is clear that the action research process has contributed to creating a climate for enhanced development and assessment of general skills. In a medical context, the qualitative, action-research mode I followed in evaluating my practice may be seen as a response to the challenge of casting off epistemological bias. By drawing on students' experiences and comments in evaluating and changing my practice, I demonstrated a democratic attitude.
Develop as a professional?	As a result of my research, I have developed an understanding of the rationale for educational change. I have come to understand that learning skills and the development of competencies useful for work and for life in general, are compatible, and how the process of higher education can help to create an end-product (doctors) that will be able to respond appropriately to the demands of health service delivery in the twenty-first century. I have developed the competence and skill to deal with the incorporation of general skills into a medical curriculum, a process which is described in the literature as a "long and hard road" (Jenkins 2000: 183-200). Input from my supervisors resulted in the modification of my perspectives at crucial points during the research. By attending and participating in the many meetings, Faculty retreats and training workshops, and by making observational notes as I went along, my educational actions became praxis (ie critically informed, committed action). Through exchanging ideas and sharing the findings of my research and planned actions with colleagues, I learned to adapt to the complexity and speed of the change that is currently taking place in South African tertiary education. The critically-informed nature of my actions gave me the confidence to speak out on matters relating to the improvement of skills development. I was "heard" in forums where my input could make a difference, which made me a real "owner" of curricular reform in the UFS School of Medicine. I can truly say that all traces of the "what-is-in-it-for-me-doing-all-this-hard-work?" attitude, which I might once have had, have disappeared.

Linking the research to the notion of extrapolation as suggested by Cronbach (1982: 47-8), the value of this study may be seen to be situated in the transformation of views about general skills development. The educational purpose of the study was clearly stated as to improve the integration and assessment of general skills (critical, cross-field outcomes) in the first year of medical studies. In pursuing this research goal, the starting point was not: How should I contribute to what is known with regard to curriculum design and the assessment of student learning? The question was rather: How can I go about transforming ideas on the integration and assessment of general skills in this particular context if I implement something which is not necessarily new within the field of research, but an innovation to me in my specific context? "Transforming" in this instance refers to the broadening of perspectives on general skills development at a time when the idea of including general skills training in undergraduate medical learning programmes was first mooted in South Africa.

Medical schools in South Africa are still struggling to integrate the development of general skills effectively into their learning programmes. The findings and recommendations of this particular case may thus be valuable for extrapolation to other cases — not only in South Africa, but in many developing contexts where students need to demonstrate similar competence.

5. Conclusion

In qualitative research reflexivity is recognised as a method for questioning, legitimising and validating research practices and representations. Reflexivity, according to Pillow (2003: 178), not only contributes to producing knowledge that helps to understand and to gain insight into the workings of the social world, but also provides insight as to how this knowledge is produced.

Against the backdrop of the action research study on the integration and assessment of general skills in an undergraduate learning programme, this paper endeavours to contribute, through reflexivity, to the legitimisation of educational practitioners as generators of knowledge. Our purpose was not to enter the debate on the merits of action research as a form of educational enquiry. Rather, the idea was to ex-

plore the issues that emerged from the need to demonstrate that a particular study in an action research paradigm was indeed rigorous, scientific work that has helped to extend the boundaries of knowledge on the integration and assessment of general skills in a medical curriculum.

Claims of having produced grand theory have not been made. Instead, "measuring" the said thesis against the conventions of action research, as presented by McNiff *et al* (2003: 18-33), has revealed how the first author improved her practice by producing a living theory, grounded in her own authentic experiences. By being rigorously self-aware about how meanings were constructed in this study and by sharing how she had ensured credibility, the difference between an isolated, spontaneous form of reflection and action research as a scientific process was emphasised. In so doing the authors hope to encourage other action researchers who are struggling to generate their own personal theories of practice in the uncomfortable "swampy lowlands of practical everyday work" (McNiff 2001: 1) and still need to fight for their practical workplace knowledge to be valued.

In the final analysis, we wish to echo what Pillow (2003: 193) says about this uncomfortable process of reflexivity as an ongoing critique of all research attempts:

> The qualitative research arena would benefit from more 'messy' examples […] examples that do not seek a comfortable, transcendent endpoint but leave us in the uncomfortable realities of doing engaged qualitative research.

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