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Paradigms of curriculum design: Implications for South African educators

ABSTRACT

This paper provides an overview of the four major research paradigms and suggests that they provide useful ways of looking at curriculum design. It proposes that worldviews can be roughly delineated along similar categories to those of research and that the fundamental differences between these four paradigms is a major factor accounting for the different ways in which educators approach the task of curriculum design. The paper uses quotes from course evaluations to illustrate these differences and to question how educators with each of the four worldviews would use student evaluations as a means of course improvement.

Key words: Research paradigms, curriculum design, student evaluations, academic development

Introduction

When we design materials, set an assessment, plot a syllabus, or try out a new methodology, we are tinkering with the curriculum. This paper asks whether we have complete freedom in our approach to this task, or whether we are captives of our own life paradigms? A while ago I completed an overview of evaluations of various academic development interventions at the Durban Institute of Technology over the last decade. The dusty task of sorting through years of questionnaires and minutes of meetings provided me with the background to a study on the discourses students and lecturers use to construct academic literacy. One thing that struck me as I completed this overview was how much the course evaluations by staff and students over the years paralleled the characterisation of research into four broad paradigms.

The link I made between the way in which research paradigms are designated and the ways in which curricula are evaluated and designed is not original. Grundy (1987) and others have applied Habermas' ontological theories to the context of curriculum theory. Hartman and Warren (1994) and Luckett's discussions of curriculum theory (1995) are particularly pertinent as they consider this from the South African perspective. In this paper, I draw parallels between research paradigms and the variety of approaches to curriculum design. I use quotes from course evaluations to

2. The Durban Institute of Technology was formed in 2002 from the merger of Natal Technikon and M.L. Sultan Technikon.

illustrate the comparisons. I end by considering how individuals working from within different paradigms use course evaluations in different ways.

Research paradigms can be seen as descriptions of four views of how knowledge is constructed, that is, of what counts as "truth". Adherents to a new paradigm adopt a new way of observing, reflecting on and describing the world. Kuhn (1972) holds that the effect of a paradigm shift is to produce a division among researchers such that they are no longer able to debate their positions due to fundamental differences in terminology, conceptual frameworks and views on what constitutes the legitimate questions of science.

Carspecken (1996: 1) reflects that:

> These days, trying to learn about social research is rather like walking into a room of noisy people. The room is full of cliques, each displaying a distinctive jargon and cultural style. There is, of course, a large group talking quantitative research much as it has been talked for decades. But there are new, flashy groups heatedly discussing "constructivist", "postmodern", "postpositivist", and "critical" research. Most of these people are talking about qualitative social research, but they disagree with each other on such basic issues as the nature of reality, the nature of knowledge, and the concept of truth. You cannot get more basic than that!

I believe it is on the issues of "the nature of reality, the nature of knowledge, and the concept of truth" that paradigm designations prove most useful. Guba (1990) shows that paradigms reflect basic epistemological assumptions, which should be exposed to discussion. By classifying research in terms of paradigms such assumptions become open to debate. A similar classification of approaches to curriculum design likewise raises awareness and debate about fundamental differences between these approaches.

Educators often consider themselves free of the influence of theory or philosophy. They are thus unaware of the extent to which their paradigm or worldview dictates their particular approach to the curriculum. Johnston et al (1996) refer to this as being held captive by the dominance of the discipline's paradigm. Because each discipline's academic literacies have evolved out of particular views of knowledge, it is useful to consider the paradigms in terms of the possible approaches to knowledge construction that become evident in various approaches to curriculation. In considering our approaches to curricula in terms of research paradigms, we can become aware of "the extent to which different frames of reference impinge on the learning process" (M^{c}Kenna and Rawlinson 1994: 279). The use of paradigms in discussions of curriculum design is not in order to judge which paradigm is best but rather "the question should be understood as a matter of values and ethical choice. We have to choose which paradigm(s) to work within and we do so on the basis of our values" (Luckett 1995: 131).

Research Paradigms

Habermas (1972: 301) states that knowledge is constructed according to three fundamental human interests. He calls these the "technical", the "practical" and the "emancipatory" interests. Habermas asserts that no knowledge is neutral, constructed as it is according to values and assumptions.

The names of research paradigms associated with each of these "knowledge-constitutive interests" vary from textbook to textbook. For the purposes of this paper I shall call the research paradigm associated with technical interests, positivist. I use the term Interpretive to discuss research associated with practical interests and the term Critical in my discussion of the paradigm

based on emancipatory interests. Lather (1991) focuses on the aims of the research to characterise four paradigms, the first three of which are based on Habermas' categories. Lather distinguishes approaches that seek to predict (positivist), approaches that seek to understand (interpretive), approaches that seek to emancipate (critical) and adds approaches that seek to deconstruct (post-structural).

My discussion of paradigms, which follows, is of course flawed and contrived; the division of research into discrete approaches bears little resemblance to reality. Lather (1991: 11) writes of the "untidy reality" of research and many researchers combine aspects of various paradigms. I acknowledge that " … neat categories are the realms of texts and courses in research methods" (Avison 1997: 92).

Positivist

This paradigm identifies a reality that can be discovered, measured and manipulated. The technical interest is served by the generation of laws allowing control of the environment. The methods used in this paradigm are empirical and quasi-experimental and great value is placed on objectivity. Knowledge is seen to be value-free and neutral, and is attained by the objective observation of reality, which is "out there" (Guba 1990: 57). This paradigm is said to serve technical interests in that it seeks instrumental knowledge, which will "facilitate… technical control over natural objects" (Carr and Kemmis 1986: 135).

The greater the distance between the subjective researcher and the objective reality, the more the subsequent knowledge is perceived to be valuable and authentic. Because reality is perceived, in this paradigm, to exist independently of the researcher, language is seen to simply be a vehicle by which reality is transmitted. Language is the "instrument of communication" (Christie 1995: 1) and is thus used (and can be taught) as a neutral mode of transferring information.

The positivist paradigm is often termed the "default paradigm" and its assumptions are frequently used as the criteria against which all research is assessed. While this paradigm should be credited with almost all scientific and technological advancement, it is denounced as lacking internal critique by focusing on methods and outcomes without asking questions about the research process itself (Usher 1996: 13). Increasingly there is criticism of the failure of positivist research to address issues of meaning and social impact (Johnston et al 1996). But hard-line positivists such as Ayer (1936) argue that all assertions about moral, aesthetic and religious values are scientifically unverifiable and therefore neither true nor false, but simply meaningless.

I now move on to consider what the impact of such a positivist worldview would be on curriculum design. The traditional or positivist paradigm would result in a reflection on teaching and learning that is fairly empirical. Knowledge, in this paradigm, is regarded as a set of skills to be transferred from the educated lecturer to the uneducated student. Positivist studies in curriculum development are usually technical in nature and concerned with being able to predict and control the environment.

In this approach, the curriculum could be simplified to the following equation: "objectives + inputs = outputs". If the objectives of the course are carefully structured and the inputs (by student, lecturer, textbook etc) carefully measured, then one should be able to establish the output or pass rate. As Luckett (1995: 131) points out, the emphasis on the product or plan makes this paradigm attractive to "university executive and academic staff who are under enormous strain to make their education systems more efficient and to produce more graduates with considerably fewer resources."

The immediate, measurable and methodological aspects of the curriculum are valued highly. Where OBE is implemented within this paradigm, outcomes are perceived as a technicist set of

skills, which are taught by the educator and then demonstrated by the student. Many discrete modules with little broader context or integration would characterize the syllabus.

Some examples of a positivist approach to teaching and learning were given in the course evaluations. For example, a lecturer's comment to the academic development practitioners, "Please improve Themba's English", seems to indicate that the language "inputs" can be addressed in an isolated and measured way. "This is evidence of a prevalent discourse that calls for the remedying of grammatical problems, as if a conscious knowledge of the surface rules of language is what students were lacking and that if these rules were made available to students their problems would disappear" (McKenna 2003: 67). Students' low proficiency in English and their difficulties in acquiring the discipline specific academic literacy practices of higher education, were frequently referred to in evaluations by lecturers as issues that could be addressed outside of the mainstream class. The whole, in this case, is simply the sum of the parts. "I'll teach my subject and you teach English" was one comment by a lecturer, some years ago, which indicates that education is perceived to be sets of discrete inputs that have little bearing on each other. Another quote that suggests a positivist approach to the curriculum came during discussions about a planned Foundation course: "… our course doesn't have 'ways of thinking', it just has facts." In a purely positivist approach, the practices of higher education are viewed as unconstrained by ambiguity, contradiction, critique and resistance.

Interpretivist

While positivism, as a research paradigm, seeks to control the environment, research in the interpretive paradigm seeks to extend human understanding thereof so that we can exist harmoniously within it. The practical interest relates to the desire to take "the right action ('practical' action) within a particular environment" (Grundy 1987: 13). The practical interest "generates knowledge in the form of interpretive understanding which can inform and guide practical judgement" (Carr and Kemmis 1986: 135). In this paradigm reality is seen as a construction, which is relative to its context. The focus has shifted from the positivist's prediction and generalisation to interpretation and meaning making (Usher 1996).

The purpose of research in the interpretive paradigm is to understand a specific context as it is. In common with the other post-positivist paradigms, this paradigm does not attempt to generalise or replicate. Another characteristic of this and other post-positivist paradigms is the belief that no research is objective or value free, "…this orientation stresses the importance of discovering the meanings which research participants give to their activities" (Quinn 1999: 47).

The interpretive paradigm is context-driven and curriculum design within this paradigm thus tries to understand teaching and learning in terms of the environment in which they take place. Knowledge, here, is seen to be a process of making meaning through interaction. The curriculum is not viewed as a linear equation but is rather seen as an ongoing activity shaped by interaction between the educator, learner, classroom and broader context. Cornbleth (1990: 24) shows how interpretive curriculum design is "an ongoing activity that is shaped by various contextual influences within and beyond the classroom and is accomplished interactively, primarily by teachers and students". Where OBE is implemented in this paradigm, it is characterized by the demonstrable development of practices through modeling and interaction, and the language classroom is characterized by authentic language in use activities.

Interpretive curriculum design values academic autonomy where individuals interpret national and institutional policies in the light of their own classroom experience. In this paradigm, as in the critical and post-structural, it is a commitment to reflection that is valued. A number of quotes by

students in course evaluations seem to indicate that the lecturer concerned used an interpretive approach in her classroom: "Here we are free to talk." "My point of view is valued."

Critical

The critical paradigm has much in common with the interpretive paradigm (Guba 1990) but here the researcher is not satisfied with understanding multiple perspectives but seeks to challenge and transform the social power relations. This emancipatory paradigm seeks to bring about independence from influences outside of the individual. "Central to the emancipatory interest is a process of self reflection which generates critical theories about the way in which ideology, coercion and distortion inhibit freedom" (Boughey 1999: 30).

The critical paradigm is the basis of most feminist research which aims not only to understand the structural shaping of experience but to do so in order to effect change. Critical research criticises most mainstream research for reinforcing the socio-economic status quo, which is "unfair, unequal, and both subtly and overtly oppressive for many people" (Carspecken 1996: 7). Critical theorists, such as Carr and Kemmis (1986), move the focus from the small local context of research to the broader structural implications thereof.

In both critical and post-structural approaches, the subjective influence of the researcher's identity is seen as unavoidable, because no methodology creates the researcher as the tabula rasa sought by the positivists. Where research is expressly concerned with human perceptions, the need for the researcher to be aware of and expose her prejudices becomes crucial.

The critical paradigm is accused of seeking to replace one powerful worldview with another (see for example Lather 1991, Usher 1996). Critical research may seek to resist hegemonies but detractors suggest that it is an ideology of its own seeking to overthrow the present regime and instil a new order.

In terms of curriculum theory, the critical approach has a concern with the emancipatory function of teaching and learning. The epistemology of this paradigm is that knowledge is socially constructed, and as such may either serve or critique existing social structures. Curriculum development would have an overt aim of exposing the ideologies of the educator, learner and those embedded in the subject matter. The curriculum would be scrutinised for ingrained power relations. The questions asked of the curriculum would be "whose interests are served by the curriculum, what curriculum would promote greater equity, emancipation and social justice, how is power distributed in the teaching learning process and how can it be more equitably distributed" (Grundy 1987: 122). In the case of a critical approach to an outcomes based curriculum, great emphasis would be placed on determining who is being served by the outcomes selected and in whose interests the assessment criteria are designed. The language classroom would be a site of critical awareness of the ways in which language both subjugates and empowers.

The many references in course evaluations from 1994 and 1998 to race show that the students of that time were critical of some of the power imbalances they perceived in the curriculum: "Why must we do all the work as the whites and now some more?" (referring to being placed in extra English language tutorials), "Many students failed the [first-term mainstream] test. The blacks were told to come to ESL [English Second Language Tutorials]. The whites were told to work harder." "She doesn't treat me like a blacksomebody." This last student quote indicates a perception of racism elsewhere in the higher education system.

Post-Structural

"Advocates of postmodernism [post-structuralism] have argued that the era of big narratives and theories is over: locally, temporally and situationally limited narratives are now required" (Flick 1998: 2). As with the other post-positivist paradigms, post-structural research takes the contextually bound, socially constructed nature of reality as its starting point. Reality is not seen as omnipotent and immutable but rather as transcendental and contextualised.

Language is a central issue in post-structural research. Unlike positivism, which sees language as a transmitter of facts, or the critical paradigm, which sees language as representing ideologies, post-structural research examines the way in which language constructs reality. The role of language in organising thought and constructing "reality" is thus paramount. In this paradigm, every educator is concerned with language.

Language is not seen as a "mirror held up to the world … conveying the meaning of an independent external reality" (Usher 1996: 31). Instead language, embodied in discourses and texts through structures, concepts and conventions, is seen as one system by which meaning is made and which dictates what can be known and communicated.

In this paradigm, research is not regarded as freeing individuals from the power of dominant discourses because "no discourse is innocent of the will to power" (Lather 1991: 13). In response to the emancipatory aims of critical research, post-structuralists argue that all research aims to discipline and normalise behaviours, including critical and post-structural research.

According to this paradigm, the texts that are the products of research are biased and prejudiced by the researcher who produces them. These texts are then added to or held up against texts produced within the subjectivity of other researchers. Post-modern approaches foreground the impossibility of eradicating bias and focus instead on making it explicit.

Post-structuralist researchers consider the way in which academic disciplines (through their curricula and their related research modes) use systems of norms to delimit enquiry and polarise alternative norms as having limited value. Researchers reinforce the powerful norms of their disciplines whenever they work within them. It is in the interests of each discipline to normalise their privileged account of reality and suppress alternative knowledge forms. In the critical paradigm, there is an aim of emancipating individuals from these powerful and "false" accounts of reality. In the post-structural paradigm, the purpose is to deconstruct how the accounts of reality are created by language within a particular context at a particular time.

The post-structural paradigm can assign value to the shifting multi-perspective nature of discourses so that the study of texts begins to preclude their fixing any discourses to a context or a timeframe. This strong version, also known as "ludic" post modernism (Ebert 1996, Lather 1991, Knoblauch and Brannon 1993, Carspecken 1996) results in the indefinite focus on different perceptions and is forever without destination. Bakhtin (1994) calls for a re-mapping of the ludic landscape within the lived social reality of language. There is a weaker version of the post-structural orientation, "resistance postmodernism" (Lather 1991, Knoblauch and Brannan 1993, Carspecken 1996), that is concerned with the way in which language structures reality but seeks to analyse a reality as it is, however contextual, subjective and temporal that reality may be. Resistance postmodernism accepts that knowledge is always provisional, open-ended and relational but grounds itself in an epistemology of difference based on social struggle rather than an endless deferment of meaning.

Post-structuralists believe reality is languaged into being. Their focus is therefore predominantly on discourses. Educationalists working within the post-structural paradigm seek to make the discourses embedded in the curriculum overt so that students can have access to the

dominant discourses that act as gatekeepers in higher education. Students would then have the agency to act out discourses, thereby strengthening them, or to refute them, thereby weakening them. This understanding of curriculum was evidenced in the quote from an evaluation by an academic development practitioner: "There is a secret code that isn't taught." Students also made reference to untaught practices in comments such as: "I must go to the library and write a essay. But I cant understand the question and I dont know bibliography and everything." "[*This* lecturer] makes one do the work but does not think I know all about analyse and references." "It's not just the words, it's the whole thing, the whole assignment. Sometimes you just don't understand what the lecturer wants."

In a post-structural approach to OBE, target discourses (and their embedded behaviours, values, language norms etc) would be overtly expressed as outcomes. Furthermore, they would be assessed within a model that critiques the ways in which disciplines construct themselves through the dominant discourses expected of students. In post-apartheid South Africa, post-structuralists ask questions about whose literacy practices are privileged in higher education, and whose "ways of knowing" are valued in the academy. Resistance post-structuralism investigates the ways in which literacy practices are used as a gatekeeping mechanism in higher education. It asks whether students are being inducted into or taught to critique the dominant discourses of society.

In my discussion of the research paradigms and the related approaches to curriculum design, I have contended that we each work from within one of these approaches. But of course we are all capable, when faced with different tasks, of using any one of these paradigms. Connole (1998: 21) reminds us that beneath the jargon, there is a familiarity to each of these paradigms:

> In the everyday world of less than strictly scientific enquiry it is possible to see all of these approaches at work. Most of us are inclined to empiricism when deciding which bank will lend us money most cheaply or where to insure our car. When we are trying to understand a friend who is recounting an upsetting incident we are much more likely to operate in an interpretive mode. The appearance of a politician on our television screen tends to trigger a shift into the critical approach as we probe for distortions and hidden agendas. When questioning the tenacity of gender roles in the division of housework we may want to adopt a deconstructionist approach towards our own ambivalences. Thus none of these approaches is wholly unfamiliar.

I believe that a conscious discussion of these approaches makes us more self-reflective and helps us to consider curriculum design from various angles. I now move on to consider how the various approaches affect the use of course evaluations.

Course Evaluations

Within the evaluations completed by students, academic development lecturers and mainstream lecturers over the years were a broad range of discourses indicating a lack of shared paradigm. This is undoubtedly one of the factors operating against a curriculum that meets the expectations of all lecturers and students.

One's paradigm goes beyond research methodology and in fact reflects one's worldview and the way in which one approaches everyday life. If a language teacher were to embark on curriculum design or revision and to use the stakeholders' course evaluations as a basis for this exercise, the approach to the data would vary greatly depending on the educator's paradigm.

In a positivist paradigm, the task would be to determine which set of perceptions expressed in the evaluations were correct and true and which were in fact misconceptions. Is it the students or

the lecturers who are portraying the "truth" about the course? Are the views of this group of lecturers more "truthful" than that group? Do students know enough about their own needs to make meaningful comments? Curriculum changes could then be made in support of the "correct" perceptions; in other words, changes to the curriculum would be based on the opinions of those evaluators deemed to be reflecting "reality".

In an interpretive paradigm, the task would be to contextualise the opposing perceptions and to try to comprehend the reasons for these differences in order to increase shared understandings (rather than "truths") between the various stakeholders. Curriculum changes, in methodology or content for example, would ensure that interaction between the conflicting voices was encouraged and that consensus was achieved.

In the critical paradigm, the questions raised by the evaluations would revolve around power and the educator would seek to critique whose agenda was being promoted within the various perceptions. Curriculum changes would then be designed to expose any false ideologies that the perceptions indicate to be inherent in the curriculum.

In the closely related post-structural paradigm, the discourses used in the evaluations would be analysed to determine discrepancies between stakeholder discourses. Why, for example, were the student and lecturer discourses so different? Which discourses are dominant and powerful? The focus would be on how these discourses construct the realities experienced by the students, academic development lecturers and the mainstream lecturers and whether all stakeholders have access to the various discourses. Curriculum change would be made to ensure students had better access and assistance in acquiring and critiquing the target discourses.

Conclusion

In the discussion of curriculum paradigms, I have endeavoured to express a need to reflect on our assumptions, values and goals. When making curriculum decisions, be they judgments about modes of assessment, choice of textbook, scope of syllabus or teaching methodology, educators need to be exposed to the confines of their own approaches. Through the designation of these approaches into four overlapping, dynamic paradigms, language teachers are encouraged to debate their beliefs. I have also discussed the various ways in which educators from within the different paradigms understand and use course evaluations. This latter point is of particular importance to Quality Assurers who need to reflect on their own understanding of course evaluations and to workshop the use of course evaluations within departments rather than to assume a shared understanding of what they are designed to achieve.

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