

Empowering mathematics education

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Introduction

In recent times the issue of access to, and success within, mathematics education has taken on particular significance in educational policy making internationally. Success in school mathematics is considered to be crucial for extending the life chances of all children, and is inextricably linked to a broad agenda for social justice. Issues of access and success are raised with particular salience and urgency in South Africa, where a new democracy is carving out new educational policies to deal with the systemic educational disadvantage produced under apartheid. Over the past ten years of South Africa's democracy, mathematics education and the quest for social justice have become inevitably intertwined, since the unfolding of policy and practice around mathematics education has inevitably spoken to an unfolding democracy, and the needs and vicissitudes of this young democracy have spoken to mathematics education. In my view, our experiences in South Africa have thrown issues of access, success and empowerment into particularly sharp relief, and it is upon aspects of these issues that I want to dwell in this paper. Although most of what I have to say relates to South Africa, my concerns are much broader than this and, I hope, have salience for other countries. South Africa is, if you like, an empirical case in relation to which I want to conduct a theoretical conversation. It is fitting that I should have this conversation in Denmark (and in Scandinavia more broadly) as this is the home of much important work in mathematics education and how it might be practiced in order to further the ends of social justice. Stieg Mellin-Olsen, Ole Skovsmose, Mogens Niss, are names which immediately spring to mind.

Over the past ten years, the transformation of education in general, and of mathematics education in particular, has in South Africa come to be linked with a set of ideas and practices colloquially referred to as "learner-centredness" or "progressivism". Although these ideas, of learner-centredness and progressivism, are rarely interrogated in any close sense, they are usually linked *inter alia* with particular kinds of classroom relations, between teachers and learners, and amongst learners, and with a curriculum structure which places emphasis on integration across subjects as well as integration of school knowledge and every day life. Progressivism has come to be associated with transformation and furthering the ends of social justice – to question it in any way is likely to provoke the comment that one wants to return not only to rote learning and authoritarian teaching practices, but also to the evils of apartheid. My intention in this paper is to try and open this issue for closer debate and scrutiny.

I am going to make two broad moves in this paper to establish my argument. I want to begin within mathematics education, and use the work of Paul Ernest (1991) on ideology as a framework to unpack progressivism and different views of social justice. From there, I want to use the work of the sociologist of education Basil Bernstein to bring out the lineaments of Ernest's work in a different way.

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Regular Lecture



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Regular Lecture

Ernest's typology of ideologies and educational aims

Ernest (1991), following on from the work of Williams, suggests five ideological positions in relation to education, which give rise to different aims and values, and which are associated with different social groups. These positions are the *industrial trainers*, the *technological pragmatists*, the *cultural* or *old humanists*, the liberal progressives and the *public educators*.

Ideological position	Associated social group	Educational aims	View of maths curriculum	Approach to social justice
Industrial trainer	Petit bourgeois merchants and shopkeepers (old middle class)	For masses: mastery of basic skills and training for servitude. For the elite: mastery of a more extended curriculum; training for leadership	Differentiated: basic numeracy skills for masses; more extended curriculum for elite.	Freedom, individualism, competition regulated by the market-place.
Technological pragmatist	Large and diffuse: politicians, industrialists, technologists and bureaucrats.	Modernised version of old industrial trainer view. Development of knowledge and skills required for present and future technological needs. Math and scientific education seen to drive technological, industrial and hence social development.	Broad utilitarian aims; importance of applied maths and math modelling. Some differentiation on the basis of "ability".	Stability and security achieved through technological, and hence social development, which lays the basis for personal advancement.
Humanist	Elitist middle and upper classes.	Valuing of knowledge and cultural traditions of the past, to be passed on through formal education. Aim is to produce liberally educated person, with an appreciation of culture for its own sake.	Mastery of pure mathematics for its own sake.	Ernest views this position as essentially conservative and hierarchical in its view of society. Associated with both conservative and liberal political views.
Progressive educator	New middle class. Academics and educationalists.	Individualistic and person-centred. Experience is the source of	Emphasis on needs and rights of the child, and the fostering of	Emphasis on individualism and flowering of individual.



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Regular Lecture

		“personal knowledge”. Knowledge is innate, re-created by individuals in process of development. Promotion of self realisation. Teacher a guide and arranger of environment rather than an instructor.	creativity and personal experience. With proper environment, child will autonomously develop to full potential. Emphasis on discovery and problem solving. Maths is a vehicle to achieve personal growth. Child’s own mathematical ideas especially valued.	Structural features of society downplayed.
Public educator	Middle and working classes, professionals.	All individuals born equal, with equal rights, gifts and potential. Education is to empower and liberate individual so as to play an active role in making his/her own destiny.	Ethnomaths, criticalmaths; maths is intended to assist in interrogating social reality. development of critical citizenship through study of maths.	Recognition of the significance of social, economic and political structures in securing rights of individuals and groups. Concerns with egalitarianism and social justice.

Table 1. Ideologies, social groups and educational aims
Adapted from Ernest (1991)

It is important to point out that these positions, which Ernest links to epistemological views on mathematics, teaching, learning and assessment, the use of pedagogic resources and so on, are ideal types. Any particular curriculum is likely to combine elements from each. One position, however, is likely to dominate. Being an ideal-typical framework it has both strengths and weaknesses. The framework helps us to see that mathematics teaching, learning and assessment (or that of any subject for that matter) is not socially or culturally neutral. Decisions about what to teach, how to teach and how to assess are tied up with broad social values, the social groups which give rise to these, and have different outcomes in relation to social justice.

In spite of its undoubted strengths and appeal, the framework has two key limitations, which Ernest himself concedes. The first limitation relates to the link Ernest makes between ideologies and social groups. Classical humanism, for example, is associated with mastery of knowledge for its own sake and is linked by Ernest to the aristocracy. Yet this position remains a significant tendency within contemporary educational policy and practice and is not only associated with the old aristocratic elite. The second limitation relates to the broad terms in which the ideologies are expressed. “Progressivism” is a very broad term, which Ernest uses to describe the approach of Rousseau and of Dewey. Yet in fundamental respects these two

philosophers are different. Likewise, Gramsci and Freire are both regarded as “public educators” but again, in very crucial respects their views are different. It is these differences which I want to tease out in order to explore what we might mean by “empowering mathematics education”.

Because the public educator position espouses the cause of social justice most explicitly it is this position I want to explore at some length. Before doing this, though, I want to foreground the difference that Ernest draws between the liberal progressive position and that of the public educators. The liberal progressive educators’ aim for education ‘is to promote the self-realization of individuals by encouraging their growth through creativity, self expression and wide-ranging experience, enabling them to reach full flower” (Ernest, 1991, pg.183) The emphasis is hence upon the individual and the need for education to facilitate the revealing of personal competences. The public educator position, in contrast, locates individual growth and fulfilment within the context of society, and regards education as a vehicle to promote social justice. The emphasis of the public educator is upon the relationship between groups, rather than upon the self realisation of the individual. In these respects the differences between these two positions are clear. As I go on to show, however, they have significant elements in common, which is why they are both regarded as “progressive”.

Different public educator positions

Having suggested, following Ernest, that while the progressive educators are interested in the development of individuals, public educators are concerned with the relationship between groups, I now want to make a further distinction, within the public educators, in terms of the different kinds of emphasis they place on inter-group relations. One position I describe, following Bernstein (1996), as *populism*, and the other as *radicalism*. Populism is advanced by educators who are concerned to gain recognition for the competences of groups within society, which are considered to be ignored or repressed. Radicalism shares with populism a common belief in the emancipatory potential of all members of a group, but goes beyond this in that it seeks to transform power relations between dominant and subordinate social groups. Each approach has different implications for social justice.

The difference between populism and radicalism can be illustrated with respect to two key strands within mathematics education: ethnomathematics and critical mathematics. Broadly speaking these strands are differentiated in terms of their intent. Ethnomathematics, seen as a form of educational populism, seeks to valorise indigenous knowledge forms, revealing the innate capacities of different cultural groups to engage in mathematical practices in their everyday lives. As a form of radical education, critical mathematics, while making similar assumptions about the universal competence of the young to acquire mathematics, seeks rather to use it as a vehicle to interrogate capitalist society, its power relations and modes of constraint, and bring about social change.

While I think this broad categorisation is useful, we of course have mathematics educators who are located at the intersection of these fields. Gerdes, for example, valorises indigenous knowledge but seeks to use an appreciation of this as a vehicle to combat the oppressive features of colonialism and neo-colonialism.

To recapitulate the discussion up until this point briefly – I have differentiated between Ernest’s liberal progressive and public educator positions, and have now, within the public educator position, identified two sub-strands, populism and radicalism. The substrands differ in the ways in which they conceptualise and



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Regular Lecture

strategise about achieving the ends of social justice. I want to now push the differentiation further to consider potentially different approaches within the broad umbrella of radicalism.

Within mathematics education, the radical impulse has drawn significantly from the work of Paolo Freire (see, for example, Skovsmose's work). In *Pedagogy of the Oppressed*, Freire sets out what for him is a central problem:

“How can the oppressed, as divided, unauthentic beings, participate in developing the pedagogy of their liberation? Only as they discover themselves to be ‘hosts’ of the oppressor can they contribute to the midwifery of their liberating pedagogy. As long as they live in the duality where *to be* is *to be like*, and where *to be like* is *to be like the oppressor*, this contribution is impossible. The pedagogy of the oppressed is an instrument for their critical discovery that both they and their oppressors are manifestations of dehumanization.” (Freire, 1972, p. 25).

For Freire, the education system is a tool of the dominant classes to impose their rule. To resist this, the oppressed need to engage critically with that which is offered to them, through a process of conscientisation. The role of teachers is to engage in dialogue with students to encourage and facilitate discussion and critique. Freire wrote much more explicitly about processes of pedagogy than about knowledge itself. As he indicated later in the same book: “Education must begin with the solution of the teacher-student contradiction, by reconciling the poles of the contradiction so that both are simultaneously teachers *and* students.” (p. 46) and again “Through dialogue, the teacher-of-the-students and the students-of-the-teacher cease to exist and a new term emerges: teacher-student with students-teachers. The teacher is no longer merely the-one-who-teaches, but one who is himself taught in dialogue with the students, who in their turn while being taught also teach.” (p. 53). Problem posing education is to replace banking education.

There are two crucial issues which emerge in this account. One issue relates to official knowledge and how selection takes place to form the school curriculum. Freire has much more to say about the transacting of the curriculum than he does about the making of the curriculum. Putting this differently, he is more concerned with the “how” of education than the “what”. On the issues of curriculum knowledge – what knowledge gets selected – he remains relatively silent.

The second issue relates to how learners are positioned in the process of engagement and critique. For the pedagogy that Freire advances, the assumption must hold that learners are in a sense already knowing, already have the competences which the process of education allows them to reveal¹. In both of these respects, Freire shares

¹ Perhaps because of the ambiguity around the status of official knowledge, educators working from a Freirean position privilege the existing knowledge of the learner and emphasise the importance of the pedagogic situation in allowing this to be revealed. Just as Dewey's supporters have moved to rescue his work from the excesses of his epigones, much the same appears to have happened with Freire. Ana Maria Araujo Freire comments in her introduction to *Teachers as Cultural Workers* (Freire, 1998):

“...we can begin to understand why some educators, in their attempt to cut the chains of oppressive educational practices, blindly advocate the dialogic model, creating, in turn, a new form of methodological rigidity laced with benevolent oppression – all done under the guise of democracy with the justification that it is for the students' own good. Many of us have witnessed pedagogical contents in which we have been implicitly or explicitly



RL

Regular Lecture

a feature with the liberal progressives, namely that content is in large measure backgrounded relative to pedagogy, which is intended to reveal inner competencies.

It is certainly the case that as far as the radical strand within the public educator position is concerned, Freire is the dominant influence, especially in mathematics education. I want to suggest another potential influence though, a theorist who is mentioned by Ernest in his account but who has not found his way into mathematics education since he did not pay much attention to mathematics as such, and that is Antonio Gramsci. While on one level he would appear to share the same political aspirations as Freire, his views on education are significantly different.

The core feature of Gramsci's view of education is that it should serve to create intellectuals from the working class. He argued for a general humanistic formative education for all, from which specialisation could later occur. This formative phase stressed "the fundamental values of 'humanism', the intellectual self-discipline and the moral independence which are necessary for subsequent specialisation." (p. 32). His justification of the study of Latin and Greek, for example, rests on the productivity of this engagement to tutor both mind and body in preparation for the long term development of the intellect. Even though he conceded that these languages needed to be replaced in the modern curriculum, he commented: "it will not be easy to deploy the new subject or subjects in a didactic form which gives equivalent results in terms of education and general personality-formation, from early childhood to the threshold of the adult choice of career. (p. 39-40). He went on:

"For in this period [between childhood and pre-career] what is learnt, or the greater part of it, must be - or appear to the pupils to be - disinterested i.e. not have immediate or too immediate practical purposes. It must be formative, while being "instructive" – in other words rich in concrete facts. [...] Schools of the vocational type i.e. those designed to satisfy immediate, practical interests, are beginning to predominate over the formative school, which is not immediately 'interested'. The most paradoxical aspect of all is that this new type of school appears and is advocated as being democratic, while in fact it is destined not merely to perpetuate social differences but to crystallise them in Chinese complexities." (ibid., p. 40)

For Gramsci, democracy (and social empowerment) entails more than enskilling the unskilled workers; it entails likewise access to the capacity to "govern". Education therefore necessarily involves a process by which young people are given access to the highest achievements of human endeavour. Only by gaining mastery of this knowledge, will the poor be able to transform their position. Gramsci is not sentimental about the possibilities to achieve this:

required to speak, to talk about our experience as an act of liberation. We all have been at conferences where the speaker was chastised because he or she failed to locate himself or herself in history – because, in other words, he or she failed to give primacy to his or her experiences in addressing issues of critical democracy – regardless of the fact that the speaker had important and insightful things to say. This is tantamount to dismissing Marx because he did not entrance us with his personal life experiences. The dialogic method as a process of sharing experiences is often reduced to a form of group therapy that focuses on the psychology of the individual. Although some educators may claim that this process creates a pedagogical comfort zone, in our view it does little beyond making the oppressed feel good about his or her own sense of victimization." (p. xiv)



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Regular Lecture

In future, these questions (of how children of the poor become intellectuals) may become extremely acute and it will be necessary to resist the tendency to render easy that which cannot become easy without being distorted. If our aim is to produce a new stratum of intellectuals, including those capable of the highest degree of specialisation, from a social group which has not traditionally developed the appropriate attitudes, then we have unprecedented difficulties to overcome.” (ibid., p. 43)

Gramsci’s writing is in significant ways different to Freire’s, even though both were equally concerned with the liberation of the poor. By implication, a Gramscian position would place much more emphasis on mathematics content and the authority of the teacher than a Freirean position which foregrounds pedagogy and the negotiation of knowledge.

This key difference between Gramsci and Freire (and the possibilities for their integration into a single position on mathematics education) shows the need for refinement of Ernest’s model. I want to tease this difference out further using the language of the sociologist of education Basil Bernstein. The discussion to this point can be represented in the following diagram.

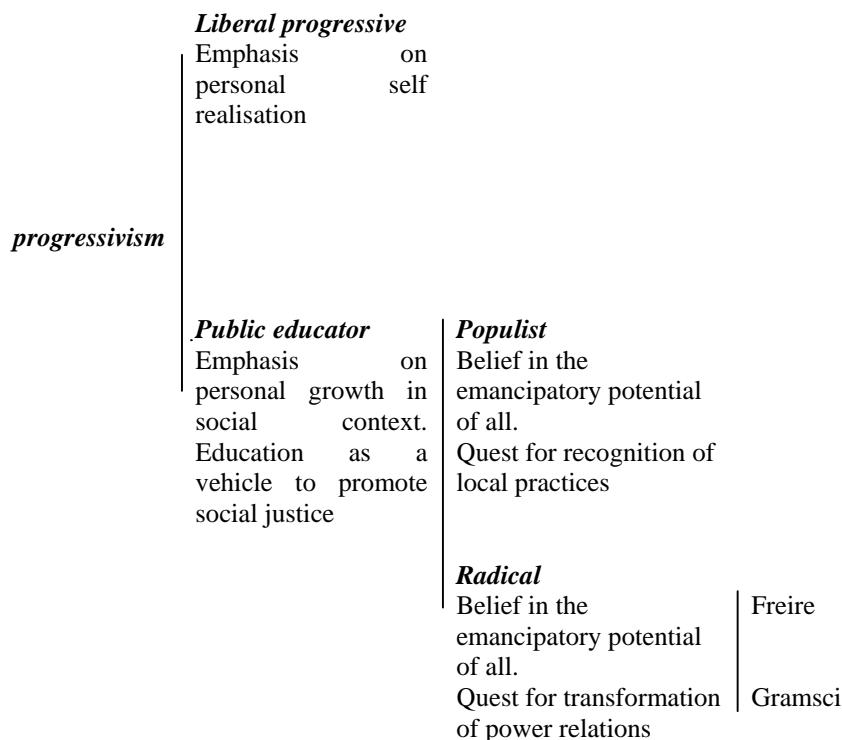


Figure 1. Strands of “progressivism”

In the next part of the paper I explore further how we might capture more delicately the difference in approach between Freire and Gramsci, using the work of Basil Bernstein.



Competence and performance

The sociologist Basil Bernstein provides a useful matrix for mapping different approaches to education. This map comprises two axes of variation. The first axis is concerned with whether the educational project is concerned with effecting change within the individual or between groups. Intra-individual educational projects are interested in the individual in two senses – that individual characteristics frame the nature of the educational project (such as Piaget’s stages of development) and/or that the aim of education is to bring about change within the individual.

The second axis of variation relates to whether the educational project stresses transmission (teaching) or acquisition (learning). I want here to introduce two terms used by Bernstein which capture this variation, that of *competence* and *performance*. Competence embodies an approach to education which stresses the competence of acquirers. Competence theories assume that all learners have inherent and universal capacities to learn, and that the educational project is one of creating appropriate environments for learning to occur. The role of teachers is regarded with some suspicion – the emphasis is upon the inherent capacity of learners to acquire. Piaget’s work is an example of such an approach to education. As indicated above, Bernstein suggests that there are three modes of competence model, which vary according to whether they stress the intra-individual or inter-group aspects:

- the *liberal progressive* (which focuses on individual processes and functions);
- the *populist* (which is concerned with the need to recognise the particular educational and other needs of learners from particular social groups) and
- the *radical* (which is concerned with the need to use education to transform the power relations between particular groups in society).

In mathematics education, we can map key positions in the field on to these three competence modes. Ernest, for example, suggests that neo-Piagetians and constructivists can be regarded as liberal progressive, whereas he combines populist and radical approaches into what he terms the public educator position. All competence positions have in common the valorising of horizontal relations between transmitters and acquirers. Or, as Bernstein puts it, “All competence modes, despite oppositions, share a preoccupation with the development (liberal/progressive), the recognition (populist) and change (radical) of consciousness.” (p. 68)

At the other end of the spectrum is the notion of *performance*. Here, the emphasis in the educational project is quite different. Learners are assumed to be in need of tutelage, and the direct intervention of educational authority. The emphasis in performance is much more upon knowledge structure and its acquisition than upon the characteristics of learners. Performance modes place emphasis upon the need to specialise the “voice” of learners, prioritising vertical relations between experts and novices, and foregrounding of content, that which is to be acquired, over pedagogy.

The differences between competence and performance modes of pedagogy can be described in terms of Bernstein’s (1975) notion of framing, where framing refers to the degree of control teachers and students have over the selection, sequencing, pacing and evaluative criteria of pedagogic discourse. Competence and performance modes

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Regular Lecture

may vary in the strength of framing over selection, sequencing, and pacing, although characteristically in competence modes these tend to be weaker, allowing children considerable latitude in making choices (associated with what Bernstein describes as an invisible pedagogy). Crucially, however, performance modes, associated with visible pedagogies, always entail explicit evaluative criteria – children are made aware of the criteria they are expected to reach when engaging in mathematical activity.

We can represent these axes in the following way.



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Regular Lecture

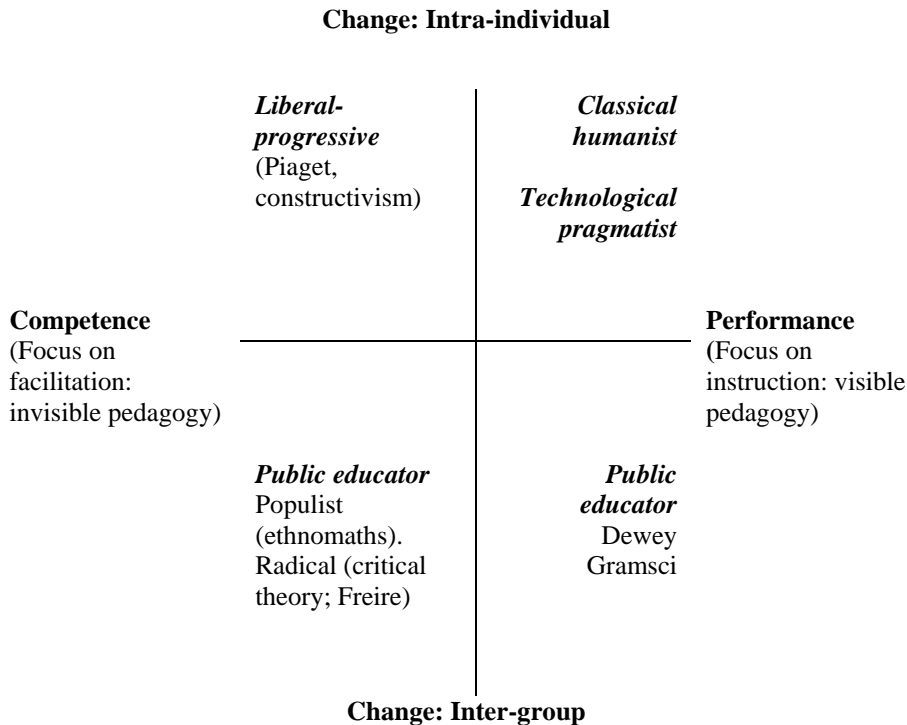


Figure 2. Mapping educational aims using Bernstein’s typology .
Source: Adapted from Bernstein (1990). See also Bourne (2004).

This schema is useful in that it provides a fine-grained tool for differentiating between different positions in the field of education in general, and mathematics education in particular, which all claim to further the aims of social justice and freedom.

In passing it is interesting to consider the location of Dewey in this model as espousing a form of performance model. Ernest shows how both liberal progressives and public educators lay claim to his work. Malcolm Skilbeck, in an introduction to a collection of key texts by Dewey, commented that “Misconceptions of Dewey’s ideas abound, especially in popularised expositions or criticisms. His educational position is frequently attached as ‘permissive’ or ‘anti-intellectual’, whereas it might be more appropriate to raise queries about the heavy demands he made to sustained and disciplined thought by all people.” (p.12). Education, for Dewey, was about providing the means for children to reflect upon their experience. Experience formed the basis from which intellectual work could begin, and it was only through the intellectual



work already done and manifest in disciplines and subjects, that the means for reflection could be found. Dewey disagreed with those brands of progressivism which eschewed the importance of knowledge. As Martin Dworkin suggests, Dewey “sharply warned against the aimlessness and dangerous permissiveness of the notion of the “child-centred school”, with its mixture of post-war bohemianism, undisciplined expression in the name of individual creativity, and Freudian solicitude for avoiding inhibitions. [...] He frequently complained about what he considered evasions of educational responsibility in so many so-called “progressive” schools. Subject matter, for example, too often had been eliminated or minimized, when the truly progressive approach called for recreating the curriculum to develop new subject matter.” (Dworkin, 1964, p. 10). As Dewey put it: ‘It [education] is continuous reconstruction, moving from the child’s present experience out into that represented by the organised bodies of truth we call studies (Dewey, 1956a, p. 11). The disciplines represent the cumulative outcome of human culture, and effective ways needed to be found to give children access to these. In Dewey’s view, traditional education ignored the capacities of the child to explore and develop, and the ways in which their experience could be recruited as a pedagogical resource. He nonetheless criticised versions of progressivism, or the “new education”.

“Here ‘the child is expected to “develop” this or that fact or truth out of his own mind. He is told to think things out, or work things out for himself, without being supplied any of the enviroing conditions which are requisite to start and guide thought. Nothing can be developed from nothing; nothing but the crude can be developed out of the crude – and this is what surely happens when we throw the child back upon his achieved self as a finality, and invite him to spin new truths of nature or of conduct out of that.” (Dewey, 1902 p. 18)

Both Dewey and Gramsci, then, while embracing different political agendas, can be seen to be similar in that each can be regarded as espousing a form of performance model.

So where does all this lead us? In the final part of the paper I want to show the implications of this discussion for curriculum reconstruction in South Africa. Consideration of government policy documents shows that the ideological influences are drawn primarily from a technological pragmatist position, combined with elements of liberal progressivism, populism and radicalism. Educational rhetoric has valorised competence-based progressivism rather than performance-based approaches. Those who have advocated the latter are often accused of elitism and conservatism, and one of the intentions of this paper is to shift the lines of the debate to open up a different kind of critical space for discussion.

Curriculum change in South Africa

From 1994 the school curriculum in South Africa was reconstructed around an outcomes-based philosophy, which specified outcomes to be achieved rather than content to be mastered. The justification for this approach resided in a credit-accumulation-and-transfer-based *National Qualifications Framework*, within which the school curriculum was nested. The rhetoric surrounding the launch of C2005 was the empowerment of teachers (who would no longer have content pre-specified for them) and of learners (who were to be engaged in learner-centred activities, including group work). A neo-liberal curriculum design was justified on the basis of a rhetoric

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Regular Lecture

borrowed from progressive and radical approaches to education. As far as school mathematics was concerned, in the early years of C2005 at least, a great deal of emphasis was placed on the problem-centred approach, which backgrounded the role of the teacher (and of textbooks). A great deal of emphasis was placed on the notion of “relevance” of mathematics to learners, their every-day lives and the contexts in which they lived and would move on to. Integration of mathematics with other parts of the curriculum was encouraged.

The consequences of these policies, it seems, may not have been as empowering as expected for either teachers or learners. There are indications that teachers have been disoriented by policies which removed them from their traditional role as didacts but failed to guide them in what to teach. Many regarded the use of textbooks as somehow antithetical to the sentiments of C2005 and many stopped using them. The consequences for the poorest of the poor learners have been catastrophic. Taylor and Vinjevold’s (1999) synopsis of early research in classrooms, in the wake of the introduction of C2005, points to classrooms in disadvantaged schools where little or no teaching took place. Planning of teaching and regular assessment were de-emphasised – group work, which very often meant nothing more than students sitting in groups working on their own, became the marker of “good practice”. “Telling” children simultaneously became pathologised. Children’s methods have been celebrated to the point where offering efficient methods of representation and calculation has become associated with “bad practice”. This has resulted in the practice so ubiquitous in primary schools in disadvantaged areas – the performing of calculations using sticks, counters or other representations of units.

Why does all this matter?

Sarah Lubienski (2002), in a highly significant paper, has questioned the impact of progressive pedagogy upon children from disadvantaged backgrounds. By progressive pedagogy she refers to forms of classroom interaction influenced by particular interpretations of constructivism and constituting what I would regard as a competence mode of pedagogy. Lubienski suggests that children from working class backgrounds, for example, find great difficulty cracking the cultural code in reform mathematics classrooms. It is not that they are unable to grasp mathematics *per se*, but they are unaccustomed to the highly individualised forms of engagement promoted in progressive classrooms. Boaler (2002) in an equally important paper, acknowledges the difficulty that Lubienski describes, but suggests that the solution is not to move back to the somewhat authoritarian, rote patterns of teaching and learning of the past, but in fact to assist all children to ‘crack the code’ of progressive classrooms by making explicit the expectations made of all children, For example, she suggests three strategies used by teachers in her own study, and those of the QUASAR project she discusses: introducing activities through discussion which enables the teacher early in a lesson to detect ‘the degree of support or structure students needed’. (p. 248); teaching students to explain and justify their approach to mathematical tasks, thereby making explicit for learners what teachers expectations in this regard were; and making real world contexts accessible, encouraging ‘students to interpret mathematical and real-world variables and their relationship with one another’ (p. 252). This amounts to making the evaluative criteria explicit – a crucial feature of a performance pedagogy.

What do I conclude from this? I want to suggest that the rhetoric of empowerment has, until now, been firmly positioned on the competence side (see Figure 2 above). Liberal progressives and public educators have, in this sense, found common



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Regular Lecture

cause. The work of Lubienski and Boaler, and many others in South Africa, suggests that for some learners, especially those who do not come from middle-class backgrounds, competence modes of pedagogy may be less than empowering. Up until now, empowerment and social justice arguments have been presented as necessarily requiring competence modes. My intention in this paper has been to suggest that this may not necessarily be the case. This is not to deny the important work already done by critical mathematicians, ethnomathematicians and others. Rather, I am suggesting that they need to be re-inscribed within performance modes of pedagogy, which re-insert the vertical position of the teacher and reinstates the importance of content. Using Jill Bourne's (2004) terms, it means establishing an agenda for a radical visible pedagogy.



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Regular Lecture

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