

Editorial

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I often see this quote, attributed to Nelson Mandela, “Education is the most powerful weapon which you can use to change the world” on school notice boards, on websites of education organisations and in public buildings. It’s a feel good quote that makes us, as educators, feel as though we are doing something worthwhile and important. But as researchers of education, we must ask how does education enable us to change the world, and what kind of education will enable us to change the world? Formal education aims to do a wide range of things, such as to teach basic competencies of literacy and numeracy, to teach a range of content knowledge and skills, to enable learners to develop a range of generic skills like problem-solving, effective communicating, and working in teams, as well as to develop people who will participate meaningfully in, and contribute to, their society and possibly even change it.

Gert Biesta (2009) summarises these purposes of education as qualification, socialisation, and subjectification. The *qualification* of children, young people and adults means that education provides them with the knowledge, skills and understanding and often also with the dispositions and forms of judgement that allow them to “do something” (pg. 39). This could be about training for a particular occupation, or a more general learning about science or history. A second key purpose of education is its *socialisation* role, which is about learners becoming members of a society that values particular attitudes and behaviours. Socialisation is about the continuation of culture and tradition. A third purpose of education, that Biesta calls *subjectification*, is about the individual becoming a subject who is independent and autonomous and who acts with agency. While there is probably some general agreement among educators that these are important purposes of education, we often disagree on which of these is most important—Hugo and Wedekind (2013) refer to this as conflict over the ordering principles of education—and on exactly how we can best achieve these purposes.

These different purposes operate at all levels of the education system. Education works at a range of levels with both children and adults and each of these levels operates with different logics. Foundation Phase schooling has a different purpose and form compared to secondary school, and the same for TVET and Higher Education. The commonality is that three basic message systems of curriculum, pedagogy, and assessment operate at each of these levels but in very different ways. The kind of knowledge selected and the way in which it could be taught and assessed is different at each of the levels of the education system, and also differs according to the purposes of education, and which purpose is considered to be of most worth.

It is probably true that most education researchers in South Africa want their research to contribute to social justice, but the ways in which they think this can be achieved are different. This general issue of the *Journal of Education* carries seven articles that focus on the various levels of education including the Foundation Phase, secondary schooling, higher education, and informal adult education. The articles focus on different subject specialisations within these levels; Dixon and Janks et al. focus on what the curriculum calls Life Skills, while Stott, Jita, and Ellery all focus on the subject of science. Each article also focuses on a different object of study at the level of education. Dixon et al. focus on the official curriculum of the Foundation Phase, Ellery focuses on the kind of knower that can best access science knowledge at university, Stott on the pedagogy and resources that may support the learning of science in low-quintile South African schools, and Preece on perceptions of young people of what it means to be a citizen. Some of these research studies focus more explicitly on the instructional discourse of education—how education creates opportunities for epistemological access—while other studies focus on the regulative discourse of education, which is about socialisation and inclusion. In each of these a different purpose of education is foregrounded.

The first article by Kerryn Dixon and colleagues at Wits provides a historical analysis of the Foundation Phase Life Skills curriculum. Taking a sociological stance, the authors use Bernstein's concepts to engage with the question of how Life Skills has been historically depicted in the Foundation Phase curriculum (since 1977), how it is currently sequenced and structured in the CAPS curriculum, and what this then means for the kind of knowledge that Foundation Phase teachers need to have. Regarding the evolution of the Life Skills curriculum, it becomes clear that the Transvaal Education Department for white children had a curriculum which was strongly classified (in that that subjects had clear boundaries between them) and which understood children as requiring an adult to mould and supervise them. We know that these strong subject boundaries weakened in C2005, and the ideal child is re-imagined as a more active participant in her learning.

What happens in the CAPS curriculum is that everything that is not literacy and numeracy is put into the container called *Life Skills* and the authors argue that this curriculum provides “no ordering principles and no logic of progression.” This means that the discipline knowledge that underpins the curriculum is obscured. This then has implications for Foundation Phase teachers' knowledge and their education. The authors argue that the path to ensuring what counts as good education is to teach Foundation Phase teachers “disciplinary ways of seeing and reasoning” so that they are able to understand and progressively teach appropriate scientific concepts. In this study the instructional discourse is the ordering principle that is valued.

For Karen Ellery, working in the field of an access science programme at a university, the purpose of good education is to enable epistemological access to the discipline. She draws on the theoretical work of Bernstein and Maton to engage with how knower attributes might support or hinder students' access to the scientific knowledge that the access programme wants them to understand. The access programme is intent on developing knowers with two

specific kinds of disposition. The first is a “generic” disposition towards learning, which leads to becoming an autonomous learner. The second is a disposition that is specific to science, namely to recognise and value the epistemic norms that inform the practice of science. The learners are required to develop the practices of being “rigorous, curious, reliable, and objective, working accurately and precisely, estimating appropriately, observing carefully, seeking simple solutions, and thinking analytically and critically.” Clearly, these dispositions or ways of being are intricately entwined with the knowledge of science and are not simply generic. Ellery argues that these gazes need to be clearly cultivated if social justice is to be achieved. Thus, higher education should focus both on the social and the epistemic relations of learning science, with the end goal being that learners have both the disposition and the knowledge of a scientist.

Staying with the question of learning science, Angela Stott presents an argument for the usefulness of a formalistic and instructivist pedagogy for science learning in low-quintile schools in South Africa. Like Ellery, her concern is with how learners gain access to science knowledge. However, her solution is not to focus on the knower or the social relations, but, rather, on creating structured learning environments for school children using drill-and-practice worksheets. She is aware that this is a controversial proposal, given the very strong ideological support for constructivist pedagogies in post-apartheid curriculum reform discourses. She draws on a range of literature and her own experience as a science learner and a science teacher to argue that the context of low-quintile schools is appropriate for a structured approach to teaching science. Since there is little evidence that good constructivist teaching has taken root in any sub-Saharan countries, she suggests that carefully designed worksheets and software that enable learners to gain mastery through repeated practice and clear feedback will be the best way to enable learners to gain access to science knowledge.

In contrast to Stott’s call for good instructivist pedagogy, Mutekwe starts with the assumption that a socio-cultural approach to teaching is a good thing, particularly in the quest for social justice, and the creation of inclusive classrooms that provide educational opportunities for all. He presents the perspectives of 20 teachers from secondary schools in Gauteng who believe that the approach is productive in their classrooms. Mutekwe provides a clear explanation of Vygotsky’s concepts of the Zone of Proximal Development and scaffolding using materials and artefacts. It becomes clear that in fact Stott’s call for structured materials is a very concrete example of how teachers can mediate and scaffold learning experiences, in order to move learners to greater understanding. This seems to support her claim that the instructivist/constructivist divide is often an ideological one that is unproductive. Rather, it would be more productive to engage with the question of what kinds of teacher mediation, and learning materials will in fact support learning in particular contexts. Neither Stott or Mutekwe provide rich evidence from classrooms about how a good instructivist or good constructivist pedagogy may actually influence learners’ understanding, motivation and learning. This is not an easy research task, but one that we as South African researchers need to tackle if we are to generate data that will provide insight and understanding of learning in different contexts.

Moving to the field of teacher education, and again in science education, Jita's study focuses on students who are training to become science teachers. She is interested in how these student teachers use ICTs in their teaching practicum as well as to what extent they are given the opportunity to learn ICT skills during their course. Most of the surveyed students said that they had developed ICT skills during the course, yet there was not a very obvious uptake of using these skills to teach science during their practicum. This is unsurprising since many schools do not have the necessary ICT equipment. At the same time, it was not clear that the students had thought very deeply about the purpose of using ICTs for teaching science. This points to the need for teacher educators to think again about the purpose of using ICTs to teach science, and how these purposes can be best achieved.

Stepping back from the specific learning contexts of the previous papers, Mathebula's paper takes a broad, macro perspective of the whole system by engaging with the question of quality education as a basic human right. He argues that the right to basic, quality, and democratic education is being eroded in post-apartheid South Africa. One example of this is that under a neo-liberal policy the decentralisation of governance to school governing bodies takes a market-related stance to fees which in fact builds structural inequality into the system. The same system sees learners as both investments and consumers, which leads to a very narrow understanding of the purpose of education. Mathebula argues that we need to take the lead from protest scholars and continue to fight for education as a human right for all in South Africa and not only the elite. It is also a call to broaden our thinking about the purpose of education beyond simply market measures.

The final paper in this issue focuses on the socialising role of education (in this case, of informal education) and engages with how Lesotho youth in a range of youth groups understand the concept of citizenship. Mantsejoa Nthabiseng Thakaso and Julia Preece show how the participants in their study are caught between the global policies of human rights and more immediate traditional community responsibilities. The youth whom they interviewed mostly understood citizenship in terms of a communitarian perspective, which involves volunteering and caring within their immediate community, and less so from a civic or cosmopolitan understanding of citizenship. This reflects the tension of the global and local pulls in the purposes of education, and raises the question of what it means to socialise learners into both local and global contexts.

This issue carries articles that point us again to the question of the content, purpose and direction of education in South Africa and how we can best reach what we believe good education is. As education researchers, we need to continue to have robust discussions about what we value in education and about how we can generate data and use theory to deepen our understanding of how we can achieve the education that we value.

References

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