



**Education
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TRANSFORMING EDUCATION

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REVIEW HIGHLIGHTS

- > Power, participation and the process of curriculum making in community education
- > Developing new qualifications for adult educators
- > The language of 'skills shortage' A critique
- > The size and shape of the post - school training system

This is the second issue of the EPC's Review for this Year. Once again it brings together an extensive set of writings produced largely by young researchers. Thematically speaking the articles reflects a range of issues. Some focus on the question of community organisation and participation in the development of educational processes and the curriculum in particular. They provide a richly textured account (even if brief) of the nature of working class communities and the complexities of negotiating educational development or as one of the articles explains "in an attempt to surface and investigate how some of our assumptions about curriculum making have translated in the messy business of developing a non-formal community education programme"

We also publish here the reflections of our 'young' community based research 'interns' – actually researchers drawn from the communities we work in and who are members of the research teams constituted for the purpose.

As you will see this raises important questions about a 'working theory' and practice around pedagogical and methodological questions. Interestingly and somewhat innovatively a reflection on a multi-media exhibition adds to the weight of issues relating to community based knowledge construction. In the same context issues are raised about the pressing question relating to 'education for whom'? This, as part of a larger enquiry about the nature or potential for post-school education and training.

We are pleased too that we were able to ask a visiting scholar to reflect about this particular aspect of our work from his direct interactions with it. He drew on his wide and multi-contextual experiences to speak especially to the question of the role students and academics have in relation to the struggles around education.

There are reflections about formal professional qualifications for adult educators and the difficulties relating to how these might be conceptualised, the question of the diversity, shape and size of what might be appropriate for the post-school education and training sector and the conundrum about the lack of learning opportunities relative to the large number of potential learners outside the system. Other articles concern about industrial policy and its meaning for the manufacturing economy in relation to widening the remit of the skills acquisition strategy and a critique of aspects of the skills policy by reference to the issue of 'skills shortage'.

Perhaps the most important 'discovery' for us in the EPC, is the realisation that there is a fount of very important ideas being germinated by researchers, who in some cases have only recently entered the world of educational research and writing. Undaunted by their lack of experience and contrary to the widely held assumption that it takes many years to develop the ability to write coherently, they have put this to the test in this collection. Now it seems entirely plausible to argue on the basis of this record, that the path to academically accredited writing is not at all as distant as we are sometimes led to believe in the foreboding discourse especially of academics about such writing. This is not to say that the process of mentored development is unnecessary. Indeed it should be sedulously fostered everywhere together with the skill of critical reading and study, since without it these endeavours are not possible. Careful attention has to be paid to this issue if we are to overcome the pessimistic refrains about a 'diminishing' body of scholars. We remain, in the EPC committed to foster the enhancement of such potential scholarship – especially socially engaged scholarship, with the extremely limited resources at our disposal and we demonstrate here the possibilities for that.

In this issue we have also embarked on the process of providing brief book reviews – not at all in the staid mode of academic peer review for accredited journals but largely as way to encourage the reading of texts shedding light on the issues that are signaled in the text rather than in the style of a critique of the book's attributes – its content, style, efficacy for purpose, scholarly attributes, argumentation and other characteristics. In fact the idea is to get others to share what they are reading, which might be of value for the work we do collectively. The review provides one such example by reflecting on the uses of one of our own publications – on Work, Hope and Possibility – but also about other very readable texts.

We hope that you will enjoy the writings as much as we have had in assembling them. It goes without saying that your critical comments are always most welcome.

Enver Motala and Salim Vally (for the EPC)

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Power, participation and the process of curriculum making

Thalia Eccles, Justicia Jaftha and Irna Senekal

Introduction

This article is a reflection on the notion of curriculum based on the work of the Community Education Programme. It emerges from on-going thinking within the CEP about our work and is an attempt to grapple with some of our assumptions about curriculum making in developing a non-formal community education programme. We start by providing a description of our ideas about participatory curriculum making and outline in broad strokes the process we are following to develop our programme. We put forward initial ideas that formed part of our 'working theory' of participatory curriculum making and discuss in some detail how this has taken shape in practice. We conclude by stating the foundational concepts embedded in our work and our hopes for the future of a community created curriculum.

How we use the term 'curriculum'

We recognise that there are different ways of looking at the 'curriculum'. If we were engaging in a conventional educational programme and the curriculum was being designed centrally by subject experts, then we are likely to begin by defining it as *content* - those things experts think learners should know or understand. Such a curriculum might also include *skills* and *attitudes* and *performative outcomes* that can be tested and measured. This curriculum could also be about *method*; the ways an educator could engage learners around the content of the curriculum. These curricula also embody *principles and beliefs* about the world and about learners that curriculum designers and educators hold. Rarely are these hidden aspects of the curriculum made explicit.

Within our programme we use the term 'participatory curriculum making' as a short hand to refer to the *process and praxis* of collective curriculum making by educators and learners. We proposed in our 'Community Education Manifesto'¹ (Community Education Programme (CEP), 2014) that participatory curriculum making involves educators and learners in a collaborative journey of investigation and learning which has as its intention the radical reimagining and remaking of our world. In our Manifesto, we argued that '*the values and beliefs which underpin education must be made clear and must be for the benefit of people – it must be humanising*' (CEP, 2014, p. 5); that the curriculum should be '*useful to learners and society*' (CEP, 2014, p. 6); and that it should show that '*knowledge from the community, from urban and rural areas is important and respected*'.

We suggested that '*we can all investigate and create knowledge about things that are important to us*' (CEP, 2014, p. 8) and the curriculum should help us 'work to create mutual understanding and respect across and between different cultures and knowledge systems' (CEP, 2014, p. 8). Our Manifesto states that responsibility for the curriculum and learning should reside with educators and learners, 'educators can learn from learners and learners can learn from educators (and learners can learn from learners).' (CEP, 2014, p. 11).

We put forward the idea that learners and educators '*should have autonomy within their learning spaces to choose what to learn*' (CEP, 2014, p. 11) and that education should build on the daily experience of living that learners have. We wanted a curriculum that puts forward '*a whole range of different ways to explore stories, ideas and issues and to learn things that are useful to us.*' (CEP, 2014, p. 12). We should define collectively what useful education is. We argued that using one's mother tongue for all education activities should be supported and enabled through switching between languages when we learn together. This means that curriculum materials should be in all the languages that we use for education.

The reason why we think about curriculum making in this way is because we acknowledge that the philosophical underpinnings to our work fundamentally shape the space from which we respond. This ontological orientation is in turn a counter to living and working in a context where new forms of global capital accumulation have fundamentally reshaped public education by fusing ideology and material forces into a historical bloc of neoliberal common sense (Torres, 2013). Neoliberalism has connected the state firmly to working in the interest of capital, thus remaking the nature and purpose of the state. By redefining ideas around what is in the common interest and for the public good, neoliberalism disrupts the relationship between each of us and the state, and between our communities and the state. In doing so it has advocated for a reduction in the role of the state in the public sphere, emphasising the need to privatise public goods and allow an unfettered market to determine what is useful and what is wasteful, or not for the public good. The effects have been devastating for working class communities everywhere. Whilst these issues are being explored and challenged in our learning space, they are not the remit of this article; and have been well established by our colleagues (Motala & Vally, 2014; Baatjes, Baduza, & Sibiyi, 2014).

We have experienced curriculum making as an intensely political process and praxis. We also see other strands within our working theory of curriculum making. For example, we think that curriculum making is also about the unveiling of the world, knowledge and hope. (Freire P. 2005; Freire P.1998). For now we would like to focus this reflection on what we are learning from our experience of power in conceptualising, designing and structuring the space for participatory curriculum making. In exploring this strand in our thinking, we are not yet trying to pull together a comprehensive conceptualisation of participatory curriculum making. We are attempting to articulate what assumptions and ideas we see in our work now and which we are consciously inserting as part of a 'working' theory that fits and illuminates our work at this time.

¹ We developed our Community Education Manifesto as a collaborative document written by members of the CEP to document our understanding of the purpose of education and as clarification of the principles that inform our work. This is not a 'finished' document and we intend to revise and develop this document annually.

The story of our curriculum making

Over the past year we have started to build a non-formal community education programme. This work has brought us - seven academics placed at the Centre for Post-School Education and Training (CIPSET), together with 21 adults from communities surrounding our campus - some of whom are learners or educators from ABET groups, and some of whom are activists involved in environmental and community development struggles. We meet for two, sometimes three days a week.

Our first sessions focused on clarifying our purpose to develop non-formal learning programmes based on key issues facing the community in which our campus is situated. We followed these discussions by walking along planned routes through the neighbourhoods close to campus over a period of three days, really trying to experience afresh what is a familiar world to us.

We documented our observations through writing down our conversations with a range of community members and sharing our own stories, and by linking interviews and stories to the pictures we took. We identified four big themes that connected our stories, pictures and observations: caring for children and adolescents; food and hunger; environmental justice; and critical citizenship.

Having started to come together as a group, we took time to articulate a set of principles that reflect our collective voices and commitment to making an education that countered our negative experiences of learning, built on positive experiences of learning and on our hopes for the future. We called this our Community Education Manifesto. We developed our ideas by exploring through personal stories our learning and teaching in formal and in-formal settings and using these to develop a shared notion of the purpose of community education and to set out our expectations, beliefs and ethics for working and learning together. We said "Everyone should have access to education in practice not just in policy. There should be no barriers to education" (CEP, 2014, p. 7). We stated our belief that "Education must build self-awareness so that the social basis for actions and beliefs can be known and questioned"; that education "must promote working together for mutual benefit"; and "should enable social change for equality and justice." (CEP, 2014, p. 5).

We made a commitment to working as a collective, making decisions as a group, sharing responsibilities and to formalise these intentions in a regular governance meeting. We saw as very important a language environment where we will communicate across languages and recognise the way in which language can challenge privileged experience or knowledge; or privilege some experience or knowledge by enabling or constraining our participation. We published our Manifesto in the two languages of our group: isiXhosa and English.

We then prepared for an education event that would help us evaluate the resonance the thematic starting points for making curricula had with the intended participants in our programme. We called this event a Community Exhibition. We mobilised community members to attend the event by walking through the neighbourhood and talking with people about our work and distributing invitations to attend the event. We attended community meetings and talked on Community Radio about our work. The exhibition was held at a local community hall within easy walking distance of most of the neighbourhoods we had visited before. During the exhibition, we walked small groups of community members through the displays, engaging them in dialogue about what they saw. We invited them to join larger gatherings that watched the digital stories we had made and subsequently entered into conversation about the issues that emerged from these stories. We discussed our intention to initiate further education work through establishing Community Learning and Investigating Circles (CLICs)² in the neighbourhoods around campus.

Our initial plan was to divide ourselves into groups working on developing CLICs within each of the curriculum areas we had identified. However, having found funding for only one area of our work, environmental justice, it brought us together to work as a single Community Learning and Investigating Circle. In May we began the next phase of digging deeper into the broad theme of environmental justice, by examining what we understood by participatory curriculum making and learning for emancipation. Surfacing again our experience of teaching and learning, we reminded ourselves that we had argued in our Manifesto that '...educators can learn from learners and learners can learn from educators and learners can also learn from other learners' and that this was an important element in creating an 'education that is based on a participatory, flexible curriculum' (CEP, 2014, p. 11) which recognises that '...we can all investigate and create knowledge about things that are important to us.' (CEP, 2014, p. 8). With this in mind we started a new cycle of investigation, reflection, and learning around the use of energy in our neighbourhoods.

First we started with a dialogue of what we understood by environmental justice. Next we drew on our shared experience to discuss how power relations in the community and in our society shape people's access to and use of energy sources. We used role play to test and develop our emerging ideas and adapted the "STARPOWER"³ role play to explore access to and use of energy, allocating the roles of policeman, councillor, residents living in RDP houses, residents living informally in shacks, a petty criminal, bank manager, and energy entrepreneurs amongst ourselves. The role play resulted in a dialogue that revealed a daunting level and range of exploitation of the poorest residents in our community especially shack dwellers, and the centrality of the issue of 'unauthorised' electricity connections in poor communities. We continued by detailing the strategies that poorer residents employ in accessing and using energy, the structural conditions that give rise to these strategies and set out some of the consequences of their access and use of energy. We then initiated a second role play that looked at participatory ways we can enter into a dialogue with residents about 'unauthorised' connections and what could be done about the issue, with a view to developing a longer term learning programme.

² A Community Learning and Investigation Circle (CLIC) is the name we gave to the learning grouping formed to provide an on-going structure for learning. A CLIC is mirrored on other literacy and study circle examples used in popular education including the CLINGs (Community Literacy and Numeracy Groups) initiated by CERT in Gauteng. They would provide a loose formation for a particular group of people to investigate and learn about an issue, skill, or subject and to move to action based on reflection and learning. It is within these spaces that a participatory curriculum is grown.

³ STARPOWER was developed by Shirts in 1969 to show how those with privilege can use their power to preserve and expand their position in society. It places participants in a position where through role play they experience oppression and come to explore through discussion the ways in which class, race and gender contribute to oppression and exploitation

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The second role play revealed that we will need to 'have something in our hands' (Community Education Programme, 2014); namely, an education experience that will engage residents authentically. We believed that it was very likely that a strong focus for community members might be on issues of household survival like finding work and getting access to secure housing, rather than exploring energy issues on their own. We also quickly discovered through the role play that we all needed to know the basics of how electricity works ourselves. Role playing introduced both fun and seriousness into our learning; it allowed us to continue working with stories as a non-threatening starting place for exploring a difficult issue and allowed us to recognise the value of theatre in opening up a complex issue we wanted to understand more deeply. Through theatre we could initiate a dialogue with residents and link our stories with those stories we saw residents bringing to a shared learning space.

So, we set off to test our emerging thinking about electricity by taking pictures and interviewing residents about their access to and use of energy in three informal settlements close to campus. We arranged practical workshops on electricity for ourselves and started to develop the outline of a play that brought together our thinking about 'unauthorised' electricity connections. These activities added to our knowledge base and expanded our science knowledge and vocabulary. We also had a good range of photographs that could support us in writing up our interviews and in producing our own writing on the issue. Over the next month and a half we sharpened our focus in looking at access and use of electricity, calling our exploration "*Behind the Wires*" to reflect our intention to look behind the surface of the issue of 'unauthorised' connections. We worked on refining our writing, wrote a manual which enabled an interactive exploration of basic electricity concepts, and developed a script for our play and rehearsed it.

These activities culminated in a mass education event that mobilised and engaged large groups of community members every day in a series of linked activities, starting with the practical exploration of electricity, and moving on to small group discussions of the posters and pictures, and culminating in a play that ended with a dialogue around the issue of 'unauthorised' electricity connections. We used these events to again evaluate the suitability of our curriculum ideas and to identify people with an interest in joining us in future sustained community education. Afterwards we came together as a collective to reflect on how this work was unfolding.

This is where we are now: our work is incomplete and will perhaps always be in a state of 'becoming' because it is embedded in an unfinished reality (Freire P. , 2005, p. 84). It has often been emotionally hard, complex and difficult to bring into practice. As we look forward now, we are facing questions about how we should consolidate our work, about the future direction and scale of our work, and around connecting our work to the efforts of others in the community and in the academy to create hopeful and alternative possibilities for learning and being.

Reflections on power in participatory curriculum making

In this section we aim to explore some of the underlying ideas and intentions that are contained within our participatory curriculum making process. These propositions centre on the view that education is political, is embedded in a historical context, and has an emancipatory function in society.

The idea that education is a political act has long standing within the emancipatory tradition of adult education both in South Africa and elsewhere. Even Paulo Freire, who did so much to establish the principle that education is political and *cannot* be neutral, found himself misunderstood; to the extent that some denied him "*the standing of an educator*", because of "*what seemed to them to be...[his] exaggerated 'politicization'*" (Freire P. , 1998, p. 1). In a similar way the curriculum we are making is bringing us into a space in which the political nature of education and indeed curricula is undeniable. This space, which lies within a large community comprising both academic and organic intellectuals, brings us questions for clarification, "How does politics enter our education?" and, "Why is the way we structure our programme vital not only to the principles we hold, but the very education curriculum we are building?"

To explore these questions we start by examining what we mean by political. In discussing the need for intersectionality in the environmental movement Ramsey writes:

"Just as you can talk about the weather without referring to the climate, it's possible to discuss politics without talking about power. When detailing the intricacies of a technical issue, it's often easy to lay to one side the various pertinent inequalities. In individual conversations this can be fine. You can't be expected to always mention everything about an issue all at once. But as rain becomes rivers, conversations become narratives. And as rivers shape the land, narratives shape our politics. If a national political conversation takes place without discussing power, then we are being silent in the face of injustice. We are siding with the powerful." (Ramsey, 2014)

And so too for us, in the creation of a curriculum – often taken to be a technical process – it is impossible to set aside issues of power and of inequality. Running through the principles we hold and the processes we have dedicated ourselves to, is the recognition that embedded in every dialogue we have and every decision we make within the process of participatory curriculum making, are issues of power. For us this means surfacing and examining intentionally and with persistence, the subjectivities which we bring with us into the CLIC.

We think it is not possible for a participatory curriculum with an emancipatory intention to be developed outside a critical and democratic educational space. Whilst we collectively have a measure of control over how we build this space, this does not automatically deal with how we have internalised, through socialisation under capitalism and apartheid, ways of being and acting in the world. Seeing how our subjectivities take shape in our actions with others requires an on-going process of critical dialogue, reflection and practice, whilst recognising too that this can be hard and an emotionally difficult journey.

Relatively greater economic security and its attendant privileges, is one of the biggest inequalities we have to deal with directly; and it divides us, more or less neatly between 'The Office' (seven paid staff members some on an annual contract and some on learnerships) and 'The Community Investigators' (primarily unemployed women and men who started receiving stipends five months into the programme). In exercising decision-making power as a whole group in our regular governance meetings, we are working through this filter, which has simultaneously embedded in it issues of class, gender and 'race'. A key feature of this process of negotiating decisions is that it is not a simple process of majority rule as in the common sense view of democracy, but a complex process that makes space for all voices and views and then using agreed principles, works through discomfort and sometimes misunderstanding to reach a decision that benefits *the group as a whole*.

It reflects the democratic and critical exercising of power for the common good of us as a community. For example, we had complex and difficult discussions around whether or not community investigators should be paid. What exactly was their role— were they co-researchers or learners in an educational programme, or both? We had to ask ourselves what 'benefit' our work is creating and for whom. Commonly espoused views, like 'the importance of volunteering' and 'commitment to the programme' were interrogated and defined. We talked about the participation costs inherent in any educational activity for community members generally, and specifically for Community Investigators who were predominantly unemployed or insecurely employed and who hold care responsibilities at home. Committed participation in a three day programme could mean relinquishing opportunities to look for work or create an income or necessitate finding alternative care for children or family members. There were also transport costs to consider. We did not resolve all the difficult issues, but we did clarify what our common purpose was and built confidence in our ability to create, critique and recreate a non-hierarchical working and learning space and to work through how our subjectivities are expressed in our programme.

A critical signifier in the changes we were making came from the way we named ourselves. In the beginning we referred to the office staff as the CEP team. This was a name that emerged within our university organisation, and it signalled an unintended but real differentiation that was a reflection of differences in status that were allocated to our work. The issue was brought up by a Community Investigator in our governance meeting. The way we used the term "CEP team", said to the Community Investigators that they were not 'part of the team', that their contributions were not important, and that in the programme the academic space had higher status than the community space. Through the meeting we acknowledged our different roles (community investigator and office staff) and confirmed that we were all members of the CEP Team with equal importance to the Programme's existence. We identified that the different spaces (community and academia) in which we exist as a team require and value different roles and agreed that within our programme and in our conduct with community and academia we did not want to reinforce these distinctions and would work to subvert them.

Practically this has meant amongst other things, that the chairing and minute taking of our governance meetings rotate amongst Community Investigators; that anyone of us can put items onto the agenda of our meetings; that we share leadership and facilitation of public events; and that we commit ourselves to learning how to create knowledge collectively. Most importantly, we persist in reflecting on our ability to work and learn in a non-hierarchical manner and remake our practice based on our new understanding.

Another place from which to examine power issues in our work was in deciding how we would structure the process to build the curriculum. At the start, the power resided with those of us who began the programme. We were given the mandate (and budget) to explore how a non-formal and progressive curriculum suitable to the newly conceptualised Community Colleges could be made. As staff, we were the ones who were viewed as holding the knowledge of how to go about this, and the research tools that legitimatised this inquiry. This view, held by community investigators, stemmed from previous interactions with research projects within which the tools of investigation and knowledge building were not shared nor interrogated.

However, the ethos with which we began this programme included both an understanding that democratic and critical participation was vital to the development of a problem-posing education (Freire P. , 2005). Accordingly this meant a curriculum that enabled dialogue and an epistemology which valued practical, experiential and lived knowledge alongside theoretical knowledge. Indeed many of us came with such experiential knowledge of education and community development. Becoming educator-learners and learner-educators though, confronted us with the difficulties of bringing our curiosity about how power is exercised in the world to the practical problems of identifying and dislodging forms of domination in our own programme. We argue in our Manifesto that '*we are all researchers*' (CEP, 2014, p. 8). Practically this has meant that whilst the power of designing a process often still lie with us as the Office, this process is scrutinised and sometimes challenged and changed by Community investigators.

Most importantly, we are increasingly jointly deciding what to work on. For example, our theme, 'Environmental Justice' came from a joint process of investigation and sense-making and whilst the issue of energy as a starting point might have resulted from administrative pragmatism advocated by the Office, Community Investigators led the argument for the value of focusing on unauthorised connections. In exploring and unpacking the issues, it was the knowledge and experience of Community Investigators that gave shape to our play and the writing on this topic and the decisions we made around designing the Mass Education Event.



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The issues we discuss above are around how power and institutional and socialised hierarchies are inserted into our work. They are not normally a feature in an exploration of curriculum and remain hidden. This is in part the result of 'ideological neutrality' embedded in neoliberal ways of conceptualising education; the social nature of learning is hidden through the western glorification of the individual expert, which is largely supported by academia to the exclusion of other forms of learning and knowledge creation. In this way it becomes harder to identify what is dominant and hegemonic in our thinking. When we think and struggle in isolation it is harder (if not impossible) to create the necessary juxtaposition and perspectives to inform a nuanced view of the world. Our isolation also makes it harder to make this knowledge useful – how can an insight into the injustice and oppressive nature of any activity be used for positive change without collective effort? Without collaborative learning we are left with our words – however true or critical – and no agency with which to act.

Conclusion

The fluidity with which we are working to create participatory curricular and the working-theory that supports it, is one of the features of our work. The ability to listen, to problematise, to reflect on and to redirect our actions and focus is fundamental to a learning process that is humanising. However, what we are discovering is that this adaptability is grounded by some evolving concepts that are embedded in why we are working in quite specific ways within the Community

These core principles are linked together. The political nature of learning is connected directly to our theory of knowledge as embedded in society. This in turn informs a collaborative and collective approach to unveiling knowledge in ways that confront 'common-sense' and forges ways of learning about and being in the world that encourages resistance.

As Au (2012) has noted, there are pockets of resistant, overtly political and emancipatory education (both informal, non-formal and even some formal) happening around the world. We are such a pocket. However the dominance of a discourse that links education tightly to the needs of the economy makes it harder to work in a way which wishes to emancipate. An education which wishes to disrupt the pressure this dominant discourse has on these spaces is up against not just an educational struggle, but a social struggle. Due to the way the conceptualisation of education (particularly adult education) has become directed at a narrow idea of what work is - the sort of work that leads to exploitation and discards the time consuming work women do daily – breaks learning up into very narrow skills allocated to different sectors that will become redundant or different by tomorrow. Basically it is not possible to get our type of curriculum to happen within a capitalist system without linking it to a struggle to change the material and economic structures that perpetuate an oppressive social arrangement of power. This is why to support our humanising, democratic and participatory education space – where we are reconceptualising what curriculum is and should do – we need to unveil the world as it is, and find hope that we can build something different through education and the associated social actions it can engender

Our names are placed alphabetically and reflect our commitment to valuing equally the different contributions we made to this article. Thalia Eccles is a research assistant, Justicia Jaftha is a research intern and Irna Senekal is a researcher in the Community Education Programme at CIPSET.

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Behind the Wires - Photo-stories and social change

Thalia Eccles

At the Mass Education Event I walk with a man through the poster exhibition, and we look at the pictures that so starkly represent the community in which he lives. We stop at the photo-posters about shack fires caused by unauthorized electricity connections and he tells me of the shack fires that happen every year and how this situation needs to change.

This conversation amidst the organised education activities that form part of Mass Education Events, was one of many between the Community Education Programme team and community members. The Mass Education Events, held in two communities in Port Elizabeth in July and September 2014, included an exhibition of more than 30 posters, practical workshops and a piece of popular theatre. On the surface the posters focuses around the issues of energy and unauthorised electricity connections found in the communities of Chris Hani, Rolihlahla and Soweto-on-Sea, but 'Behind the Wires' they shout about a need for social change.

These posters were written by four of the 28 Community Investigators who form the Community Education Programme (CEP) hosted by the Centre for Integrated Post-School Education and Training (CIPSET) and are part of a participatory curriculum which we are developing. Within the setting of the Mass Education Events the posters are codes that enable exploration of social issues, histories and narratives and the beginning of dialogue around inequality and progressive possibilities. Within the CEP they form the documentation of our community-based participatory action research and the culmination of various discussions on environmental injustice, social change and the purpose of adult education. They are the embodiment of some of the principles on which we have based the CEP:

'Behind the Wires' was the name of the Mass Education Event hosted by the Community Education Programme. This event wants to show how electricity connects with people and is both helpful and dangerous. It reveals how our access to and use of energy resources also reflect the inequality in the way our society is organised. Through the event the CEP wanted to open a participatory and democratic space for education and dialogue around what exists now, but also to start an exploration of progressive possibilities and alternatives.

Academic knowledge should be available/
accessible for everyone to use and it should be
used for social good – we support socially engaged
scholarship!

Ulwazi oluphezulu kufuneka lufikeleleke/lubekhona
kumntu wonke ukuze lisetyenziswe kakuhle
ekuhlaleni kwethu sonke- siyayixhasa imfundo
ehlanganisa abantu.

Researchers: we are all researchers – we can all
investigate and create knowledge about things that
are important to us.” (Community Education
Programme, 2014, p. 8)

Abaphandi: sonke singabaphandi-siyakwazi
ukuphanda size nolwazi ngezinto ezibalulekileyo
kuthi.

Sanna Hector's Story, written by Andiswa Matiwane, is a good example of how the academic tool of a research interview can be used to share a personal narrative. It is also a good example of how community research can not only give a 'face' and a qualitative perspective on an issue, but help demonstrate the democratic principle of popular education: that everyone's voice counts.

The Electricity Cake was written and illustrated by Mzimkhulu Keye. It deals with the complexity of power relationships in the energy industry. It also shows us the power of creativity in community education. Mzimkhulu is a keen artist who has found space for expression that helps build collective knowledge of key social issues. Using art makes social dialogue about complex issues easier.

The MacGyver, written by Nomvula Kato and Xola Masela, tells the story of practical solutions. It also shows one of the dangers of electricity use whilst highlighting the great need for practical knowledge of electricity to overcome those dangers. The Mass Education Events included a practical workshop on electricity run by the CEP community educators. The practical workshops introduced a safe opportunity to experiment with electricity and gain conceptual knowledge with which to interrogate community circumstances.

Sanna Hector's Story

Andiswa Matiwane

Sanna Hector stays in Rolihlahla and she is not using illegal connections, she stays in an RDP house.

She says that some people are using illegal connections simply because they are unemployed and some have children who they have to look after.

Some people are in danger and others are being killed by the electrical wires. "Electricity is very dangerous here in Rolihlahla. There was a house that burned down three months ago due to an illegal connection. These connections will only bring death in this community."

Many people are poor and they are paying a lot of money – R200 per month - to the people who live in RDP houses, and who make a living from the illegal connections that they are doing. Sometimes there are up to 20 connections from one RDP house.

People beg for houses so that they can live better lives like others, so that they can be equal, all together.



Many hundreds of thousands of South Africans, disproportionately women in the most disadvantaged communities of our society, are employed in such activities: in care-giving, rural agriculture, the education of children and collective projects such as cooperatives and other community based initiatives. They undertake such extremely important jobs with little or no external support but give meaning to their lives by courageously 'volunteering' themselves and their services for society, while engaging in their economic livelihoods and means of survival. Multi-national corporations use the most electricity. They use electricity 24 hours non-stop to produce goods and maximise profit for the capitalist class. Communities do not benefit from these profits. Companies' profit goes to the investors and their shareholders and not to new jobs. Government should have taxed them for their high usage of energy; instead they offer the subsidy on electricity costs.

Households all pay the same for electricity. But, middle class people work and have decent houses. They can pay for electricity for many different appliances.

People need RDP houses to get access to electricity. Energy costs for working class people make up a big part of their living costs. The government helps people who are unemployed with the cost of a small amount of energy – this is often not enough. Working class people who live in informal houses make means to join the modern age when they connect illegally.

Cutting the Electricity Cake

Mzimkhulu Keye



The Macgyver

Nomvula Kato and Xola Masela

In Govan Mbeki there are two guys who are unemployed, as a result they do not have money to buy electricity. They decided to put a needle in the electricity box in order to survive. In the box the electricity is at zero even though the electricity is running.

They have a macgyver stove and iron. The iron has no handle, and they take the wires of the iron and connect them in the box, until the iron gets warm. When the iron is warm they take the wires out of the box and continue ironing.

In most of the areas in Govan Mbeki wires are crossed up from house to house, this is dangerous for people. Cables are lying on the ground which is dangerous for kids and for everyone when it rains.

People are using illegal connections, because the unemployment rate is so high and there is poor service delivery in their community.



Who is Mr Fix-It?

Vusumzi Metha



Our society managed to have a relatively smooth transition from apartheid to a constitutional democracy in 1994. But in the 20 years of democracy our communities still experience social inequalities which continues to divide and isolate people. This is experienced by Thamsanqa. His story is common in South African townships.

Thamsanqa is a young man who has been living in Chris Hani informal settlement for 22 years, with no electricity, sanitation, water or means to make a livelihood. Thamsanqa also feels the need to make means to survive. He sees everyone around him making plans to make a living.

Thamsanqa left school without completing his studies.. There were many challenges he had to face in his home. As a result of unemployment , he became Mr Fix-it; making illegal connections in order to survive.

Electricity has affected the relations between people living in the same area. RDP houses can make a livelihood from illegal connections to the shacks. And struggling young people can make a living.

Post-School Education and Training (PSET) - for whom?

Sonya Leurquain-Steyn

Our schools are, in a sense, factories, in which the raw materials (children) are to be shaped and fashioned into products. The specifications for manufacturing come from the demands of 20th century civilization and it's the business of the school to build its pupils according to the specifications laid down.

Ellwood P. Cubberley (1916), Dean, School of Education, Stanford University

A recent conversation with an adult learner, Molly, led me to question the role of education in the lives of ordinary South African citizens. We were talking about who is being served by education and we examined the effects of this on both the broader society and local communities. This conversation formed part of a series of conversations with communities within a larger research project commissioned by the Department of Higher Education and Training (DHET). The project, *Emerging Voices 2*, looks more closely at the lived realities and experiences of people in the post schooling sector. The project aims to answer the question: How do rural communities experience the PSET sector? In response to an argument that PSET is positioned and biased in favour of the needs of the market economy and the formal labour market, which cannot accommodate the growing number of graduates needing steady jobs and similarly does not prepare students for anything beyond formal employment, Molly insisted that:

We've got to start opening our eyes and minds right now. The cries that we always have, that you send a child to school and when the child comes back, you'll find out that the child knows nothing- coming from an institution. That means that it's now all about the economy. Education is not doing something to a child, so that when the child is finished with school, then that child can stand on his or her two legs and do something. Because you'll find out that a person has a degree but that person is sitting here because he or she can't do anything. Because when democracy came in, yes we needed a democracy, but it looks like democracy killed the passion that our parents had with us. We need to have those opinions that will make sure that we save those who are still at school now, so whenever we pass-away, that generation can live on their own. This thing of the economy: it's a reality that the people who are rich are getting even richer because our children, they come from school and come to work for them in our communities. They can't go anywhere. We are sitting here with graduates and we are sitting with standard 10's that don't have work. They are working for R520 but the child has a grade 12 certificate, but they're sitting at home. They can't do anything.

This reflection captures the reality experienced by many people in South Africa and around the world who are led to believe that a "good education" will translate into a "good job". With the official youth unemployment rate rising to 36,1% this quarter, despite their "improvement" in educational attainment (StatsSA, 2014), one has to question the veracity of statements which blame unemployment on the lack of skills, when in reality it's a jobs crisis that we are faced with. Lois Weis (1990) speaks of a "working class without work" a situation not unfamiliar to 25,2% of South African citizens who find themselves unemployed (StatsSA, 2014); many facing permanent unemployment - the majority of them being youth. So what then is the role of Post-School Education and Training in society? Or more specifically as this paper raises, what *should* the role of PSET be?

This brief article highlights how the role of education in society cannot just be about preparing students to enter the formal labour market but instead how the education system needs to develop actively engaged citizens who are able to think critically and creatively about their worlds. It further foregrounds how educational institutions that form part of the post schooling landscape are intrinsically implicated in the problems of society, not just globally but more importantly, locally as well; and that an education system which does not speak to the needs of local communities in sustainable and consistent ways is not only deficient but defunct.

We know that there is no guarantee of employment in the formal labour market; employment has also become more and more precarious forcing many people to work for low wages just to keep their jobs. The dominant discourse of our time would lead one to believe that the greatest challenge fueling mass unemployment is the lack of requisite skills needed for these jobs (Allais & Nathan, 2014; Brown, Lauder & Ashton, 2011; Brown, Green & Lauder, 2001). This argument suggests that it is difficult for industry to employ more people as job seekers are not skilled enough - or don't have the right skills - for available jobs. This discourse deeply permeates society despite evidence to the contrary which clearly indicates that education levels over the last few years have been on the rise (StatsSA, 2014; Treat, 2014); forcing even graduates into unemployment (Baatjes, 2014). In a country like South Africa, where youth are almost twice as likely to be unemployed when compared to adults (StatsSA, 2014; Baatjes, 2014), this gives further rise to what appears to be a youth unemployment crisis, when in fact it's just a jobs crisis that we're faced with. As Molly reflected above, we need to start asking ourselves what the purpose of education is if students leaving educational institutions are not able to sustain themselves. What is the purpose of education if the apparent "skills" learnt at school become useless in the face of unemployment?

Sapon-Shevin & Schneidewind (1991) accurately capture what generally happens in classrooms when they said that:

The typical classroom is framed by competition, marked by struggle between students (and often between teacher and students), and riddled by indicators of comparative achievement and worth. Star charts on the wall announce who has been successful at learning multiplication tables, only children with "neat" handwriting have their papers posted for display ... Competition encourages people to survey other people's differences for potential weak spots ... We learn to ascribe winner or loser status based on certain perceived overt characteristics, such as boys are better at math ... The interpersonal outcomes of competition – rivalry, envy, and contempt – all encourage blaming the loser and justifying their "deserved" fate.

Educational institutions are breeding grounds for individualism and competition, two characteristics on which capitalism thrives and which ensure its survival. This is not to say that individual achievement should be repressed or that competition in and of itself is necessarily bad - but when unwittingly cultivated as a means to advance one's social position at the expense of others, this virtue become a vice - especially within a society where many are blamed for their adverse living conditions - despite these conditions being a direct consequence of the iniquities of capitalism. Our education system is driven by competition and individualism - feeding into this global 'common sense' which sees people as 'human capital' and not human-beings.

We also need to be very clear in our understanding of the nature of this system which churns out labourers and not citizens. Capitalism and this particular form of capitalism – neoliberalism - requires a large body of workers prepared to work for minimum wages. There is no mention of cultivating active citizens, or developing an equitable society, or investing in social well-being (unless there are profits to be made). Capitalism can only ever reproduce inequality. It is a system which places profits over people. It is a system of consumption and greed. These are the very characteristics which led the President of Bolivia Evo Morales (2008) to state that:

Competition and the thirst for profit without limits of the capitalist system are destroying the planet. Under capitalism we are not human beings, but consumers. Under capitalism Mother Earth does not exist, instead there are raw materials. Capitalism is the source of the asymmetries and imbalances in the world. It generates luxury, ostentation and waste for a few, while millions in the world die from hunger...

Indeed this is a system which is so engrained within the fabric of our society that we barely notice its effects on our everyday choices until we're forced to step back and assess the disastrous state of so many aspects of our world.

The role of post schooling becomes clear when one examines the lived realities of people living in poor communities. What is the use of degrees and diplomas and world renowned 'experts' in fields of varying specialisation if those very same skills aren't able to solve basic, everyday problems faced by many South Africans? One need only think here of poor housing infrastructure and the lack of access to basic amenities such as clean electricity, running water or flushing toilets - PSET institutions are fundamentally implicated in the problems of society if their teaching and learning, research and community engagement are delinked from problems experienced by communities. These institutions cannot stand as a beacon of hope, privilege or status - existing outside of the community it is meant to serve. PSET needs to move beyond fueling a system (the market economy) which a) makes fickle use of students exiting these institutions and b) does not consistently sustain the communities that fuel it.

Mainstream hegemony dictates that education be for the labour market. We go to school, university, college and are told to learn as hard as we can, to get the best possible grades so that we can find a "good job" which will pay us a "good salary" and our lives will essentially be set. Reality, however, couldn't be further from this. Despite a myriad examples which challenge this commonly held belief, society continually circulates students through this broken system which depicts the transition from school to work as a linear one. The result being, as Molly previously described, "educated" youth unable to sustain themselves, culminating in a massive body of unemployed adults for whom education has become worthless. From this, one has to acknowledge that if education is to serve a social purpose, it cannot only be about the economy. Education needs to be more relevant to people's lives so that when the economy fails to deliver the jobs it promises to provide, people are not automatically resigned to a status of indefinite poverty.

At the core of this debate is the social structure we find ourselves in. It is a structure of oppression which conceals the fact that we are all 'slaves' to the economy, for without serving it in one form or another, we are in fact condemned to a life of struggle. The privatisation of education (and a plethora of other publicly useful commodities) is just one of the means of maintaining the status quo: the rich getting richer and the poor getting poorer, to paraphrase Molly's statement above. What education needs to do is conscientise society to this truth. It needs to open our minds to the reality of our oppression and how our oppression and subjugation are reproduced through a neoliberal education system - indeed to global neoliberalism. It needs to help us become actively engaged citizens of the world and of our local communities so that we can denounce this system which enslaves us. Simultaneously, we need to develop a new, equitable society where everyone has access to resources fundamental to our survival. Once we have moved beyond this, we will no longer need to ask who the post schooling sector needs to serve; as the answer will become clear- post schooling must serve humanity.

Sonya Leurquain-Steyn - CIPSET

New Qualifications for Adult Educators at NMMU

Lucky Maluleke

Introduction

This article outlines an initiative to develop qualifications for adult educators at the Nelson Mandela Metropolitan University (NMMU). This is an initiative of a combined venture by the Centre for Integrated Post-School Education and Training (CIPSET) and the Faculty of Education at NMMU.

The thrust of this initiative is to give birth to formal and professional qualifications in preparing adult educators working within the adult community, technical and vocational education and training (TVET) sectors.

Policy environment

While a variety of policies attempt to address the issue of adult educator qualifications and adult education and training in general, this project is guided by the Draft Policy on Professional Qualifications for Adult Educators (2013); the Policy on Professional Qualifications for Lecturers in Technical and Vocational Education and Training (2013); the Draft Policy on Qualifications in Higher Education for Adult Education and Training Educators and the Community Education and Training College Lecturers.

These documents all stand on their own with significant similarities and differences. Based on these similarities and differences, it became apparent that broader qualifications needed to be instituted to simultaneously cater for TVET and Adult Educators.

Aims of the professional qualifications for adult educators

The qualifications aimed at educators are distinct in that they are designed to be broad enough to orientate educators to the broader political, social, economic, language and educational context and the problems of continuing inequality in the provision of formal education. They are directed at a very specific task and population: educators engaged in various forms of adult education, further education and training or development work, and TVET in different settings such as industry.

The general and broader aim of these qualifications is to have student educators gain a deeper insight into adult education, including TVET, as well as developing practical skills that are broad, flexible, and integrated into the wider contexts and perspectives.

Rationale for developing new qualifications for adult educators

The post-1994 period provided great possibilities for growth and expansion of adult education as attested to in the Multi-Year Implementation Plan (1997) and the National Skills Development Strategies (I, II, and III). Unfortunately, due to a range of circumstances in the post-1994 period, most of South Africa's higher education based resources for youth and adult education (supporting literacy and adult basic education, workers' and trade union education through to FET College lecturer training and upgrading) have been downgraded and undermined within the universities. The Green Paper on Post-School education presents an opportunity to rebuild adult education, based on its historical roots, as a cultural marker of South African society.

The majority of adult educators in PALCs (Public Adult Learning Centers) and TVET Colleges remain unqualified and are in dire need of academic programmes to provide them with the pedagogical skills required (DHET, 2013a & b). Based on the policy legislation and changes, the majority of adult educators, including lecturers in TVET colleges need to improve and update their academic and vocational knowledge, skills and experience. For example, institutions such as colleges are struggling to attract new educators with the pedagogical skills and knowledge to teach. As a result, many educators without these required skills and knowledge are employed in lower pay grades (DHET, 2013a and b).

Furthermore, the attempt to formalise adult education programmes has led to the creation of narrow programmes, neglecting the broader issues in society. The *White Paper for Post-School Education and Training*, on the other hand, provides an opportunity to expand and diversify adult education both formally and non-formally. Although this is a great opportunity to develop meaningful qualifications for adult educators working in various contexts, it also poses a vital challenge: more intentional and quality work will need to be done (ETDP-SETA, 2012). This is because adult educators are working in a number of different subsectors as well as a majority of these educators are former school teachers and unprepared for the demands of the adult education context.

Also, according to the relevant data 16 000 people are employed as either full time or part time educators in public adult learning centres (PALCs) with qualifications ranging from grade 12, N-Certificates, undergraduate degrees, as well as postgraduate certificates, diplomas and degrees. Unfortunately, many of these qualifications are not necessarily in the relevant field, and thus they are employed because of the desperate need to fill posts. The Department of Higher Education and Training (DHET) has set high enrolment targets for the near future, which reinforces the need to train and properly educate educators for the adult education sectors, because quality education demands an educator steeped in the theory and praxis of pedagogy as well as the theoretical premises and frameworks of the course contents.

It will be irresponsible of us to expect learners to learn effectively if the teacher has no idea what he or she is teaching. Although there is no one agreed upon formula or blue print to teaching a subject, decisions will have to be made to insure quality teaching and learning. Teachers need to have a clear purpose of why, what and how they teach. What is important is that teachers need to be familiar with the content of the subjects they teach. They also need to know what they want to achieve in their engagement with students. For only then will the teaching and learning event provide us with well-rounded and conscientious South Africans.

Key Basic Competencies

The European Commission understands 'competencies' to be a "complex combination of knowledge, skills, understanding, values, attitudes and desire which lead to effective, embodied human action in the world, in a particular domain". (Deakin Crick, 2008 cited in European Commission, 2013: 9). Competence is therefore distinguished from skill, which is defined as the ability to perform complex acts with ease, precision and adaptability.

From the above definition it becomes apparent that teaching is much more than a mere 'task'. The concept of competence in teaching, encompasses the following features: tacit and explicit knowledge, cognitive and practical skills, as well as dispositions (motivation, beliefs, value orientations and emotions). (Reyhen and Salganik, 2003 cited in European Commission, 2013). According to Koster and Dengerink (2008), teachers are enabled to meet complex demands by mobilising psychosocial resources in context and deploying them in a coherent way, which then empowers teachers to act professionally and appropriately in a situation ensuring effective and efficient teaching. (European Commission, 2013)

And so while teaching competencies are focused on the role of the teacher in the classroom, and is directly linked with the 'craft' of teaching – with professional knowledge and skills mobilised for action - educator competencies also imply a wider, systemic view of teacher professionalism on multiple levels.

"Teachers need a deep knowledge of how to teach their specific subject (Pedagogical Content Knowledge/PCK) (Krauss et al., 2008; Shulman, 1987), for effective practice in diverse, multicultural, inclusive learning environments (Williamson McDiarmid & Clevenger-Bright, 2008); pedagogical content knowledge (PCK) is connected with students' learning (Hill et al., 2005)" (European Commission, 2013: 10).

Clearly the qualifications to be developed for adult educators will not only enable them to perform tasks in the classrooms, but will equip them with the necessary pedagogical skills to relate their teaching to the wider context. It should be borne in mind that these qualifications are in line with the philosophy adopted by the Nelson Mandela Metropolitan University (NMMU) in recent years: humanising pedagogy. Humanising pedagogy proclaims that teaching is more than imparting knowledge; it is to address social ills, particularly inequality and injustice. More importantly, it acknowledges that the classroom is a political space for liberation and humanisation. Basic competencies for educators transform them from mere vehicles of information to agents of social change.

Guiding philosophy

This initiative is guided by a radical adult education philosophy, particularly as developed by Paulo Freire (1970; 2004). Freire's philosophy of radical adult education views education as a tool to bring about social, political and economic changes in society. In it are embedded certain principles that this philosophy ascribes to principles of democratic learning.

The idea of democratic learning is more aligned with the notion of democracy, freedom and humanisation. Freire (1970) provides a detailed discussion on the concepts of 'humanisation' and 'dehumanisation' in his seminal work, *Pedagogy of the Oppressed*. Further, democratic learning takes into consideration that any subject matter has the potential to be taught in a manner that complies with democratic learning principles (Hyslop-Margison and Sears, 2010). The avoidance of indoctrination must be ensured and for that reason subject matter is always subjected to questioning and criticism. Learners need to participate fully in the learning process. The capacity to make decisions about the society they wish to create relies on exposure to knowledge about alternative social and economic models and priorities. For career education programmes to qualify as democratic, it is critical that students are exposed to competing viewpoints about the structure of the economy, society and the labour market as well as other moral and ethical questions locally and globally (Hyslop-Margison and Sears, 2010).

The qualifications for adult educators are meant to enable these educators to apply more critical and humane approaches to teaching and learning in their working spaces. They are not meant to develop passive individuals who are indifferent to the status quo, but to help develop competencies to apply creative strategies needed for survival in a world of extraordinary suffering (Postman and Weingartner, 1969). Most importantly, educators need to understand that students are at the heart of knowledge creation as opposed to being passive receivers of an uncontested body of knowledge.

From the radical perspective, education is charged with the responsibility to do away with all facets of oppression. This philosophy does not encourage learners to adapt to the unjust world, but encourages them to change it for the betterment of all. Here the teacher and learners work together to achieve humanisation, to expose oppression, and to build a better world for all. It rejects the idea that the teacher is always more knowledgeable than the learner. It rejects the idea that the teacher is the only active participant and narrator in a learning context or that the teacher is there because the learner is ignorant. It rejects learning that does not add value or meaning to the existing knowledge of the learner and the teacher. It rejects that reality is static. Furthermore, it rejects the idea that the student is always a listener, ignorant, and has no ability to educate the teacher. (Freire, 1970)

Therefore, this radical philosophy encourages the problem-posing educational model where the teacher-student contradiction is dissolved. Both student and teacher occupy dual roles of learning and teaching at the same time. The teacher must always be motivated to engage students in critical thinking, and be concerned with mutual humanisation. The teacher needs to develop trust in the students, establish the condition for creativity and discourage memorisation. (Freire, 2004).

Conclusion

In summary, the qualifications to be developed aim to meet the needs of educators and learners engaged in various forms of adult education, further education, training or development work in different settings. They have particular relevance to education, training and development practitioners working in TVET colleges, industry, adult and community education centres, community colleges, worker's education and other relevant

contexts of adult educators. Generally the courses within these programs aim at assisting students to gain greater insight into what adult education (including TVET) is all about as well as in developing practical skills that are broad, flexible, and seen not just as techniques or instruments but as integrated into a wider context and perspective.

Lucky Maluleke - CIPSET

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The language of 'skills shortage' and the insufficiency of 'skills shortage' language: DHET and scarce skills

Siphelo Ngcwangu and David Balwanz

In April of 2014 the Department of Higher Education and Training released for public comment a Government Gazette titled the 'National Scarce Skills List: top 100 occupations in demand'¹. This document emerged out of the call in the White Paper for Post-School Education and Training to have a more centralized system for the identification of skills needs in the economy and society. The document argues, "identifying current and future skills demand as accurately as possible is extremely important if the goals of the National Development Plan, the New Growth Path and the Industrial Policy Action Plan are to be achieved." (DHET 2014:4). After identifying this purpose, the document defines some key concepts, outlines its method for determining scarce occupations and then provides a list of the top 100 occupations in demand.

Few would disagree with the statement, "South Africa needs skills." The authors agree that skills can play a vital role in human and community development in South Africa and that DHET can play a vanguard role in supporting skills development. However, after carefully reviewing the National Scarce Skills list we are compelled to offer this critique: The National Scarce Skills Lists' conceptualisation of 'skills' is too narrow, insufficiently inclusive and based on problematic theoretical assumptions; its methods are biased; and its analysis offers a selective, and in some cases, factually untrue presentation of data. To support this critique we compare the DHET Scarce Skills publication with a recent analysis published by the Manufacturing, Engineering and Related Services SETA (merSETA). We chose to review the merSETA report since more than half of the top twenty occupations 'in demand' included in the Scarce Skills publication are also included in the merSETA list.

A misleading and narrow conceptualisation of skills

The Scarce Skills publication begins with a bait and switch: skill, a general concept, is defined in terms of the requirements of formal occupations. A simple definition of 'skill' is 'the ability to do something well; expertise.' A skill can be any ability: fixing a broken leg, thinking conceptually, singing, writing a paragraph, childcare. This broad definition of 'skill' is jettisoned in the Scarce Skills publication. Instead the DHET publication considers 'skill' only in terms of 'skill levels' and 'skill specialisations' required for formal occupations identified in South Africa's Organising Framework of Occupations (OFO). This is our first critique: we argue that 'skill', a broad and important concept in education, should not be constrained to the consideration of formal occupations only. The DHET publication's conceptualisation of skills is further narrowed by paring it with two other terms: 'scarcity' and 'demand'. The publication's title makes clear the understanding of DHET: a skill is scarce when an occupation is in demand. According to the publication, scarce skills 'refer to those occupations, in which there is a scarcity of qualified and experienced people,' (DHET 2014:5). We emphasise these two points because such distinctions are important: the implications of compiling a 'scarce skills' list suggests not only that we can predict occupational demand, but also that higher education 'skills development' should respond to occupational demand and that 'skills' not included in the OFO are unimportant.

If the intention of DHET is to 'project skills demand' in a dynamic labor market, then by equating 'skills' with 'formal occupations,' DHET, in this publication, unfortunately does students and aspirant workers a great disservice. Carnevale et al. (2009:27) draws on United States labor market data to demonstrate the folly of equating skills with occupations.

The United States creates and destroys jobs faster than any other economy in the world. ... every three months, nearly 14 million workers will be hired and 13.6 million will leave their current jobs. More than half of those actions will happen because a new job was created or a job disappeared. ...Every year, more than 30 million Americans are working in jobs that did not exist in the previous quarter ...Many of the occupations workers have today did not exist five years ago. [emphasis ours]

In the modern economy, occupations (and skills required for occupational competency) evolve, become extinct and emerge *sui generis*. Yesterday, South Africa needed textile skills (then China came); today "soft skills" are in demand (because of a growing service sector); and tomorrow, "if all government's planned Special infrastructure Projects materialise", there may be a 'scarcity' of merSETA-related skills (merSETA 2013:129).

Many institutions of higher education will find DHET's equating of skills with occupations troubling. Several university initiatives (for example the grounding programme at the University of Fort Hare and the trans-disciplinary research led out of the Mapungubwe Institute) offer counter-examples to DHET's discourse. Both of these initiatives privilege the values of humanistic and liberal arts education: broad exposure to varied sources of knowledge across academic and practical fields. The tone of the Scarce Skills rhetoric and other DHET initiatives, such as the 'decade of the artisan' indicate that South Africa is in dire need of semi-skilled workers and artisanal labor. Labor market analysis completed through Labour Market Intelligence Partnership points to a different story. Of changes in the labor markets from 2001 - 2012, Bhorat et al. (2013:30) note,

High - and medium-skilled occupations such as managers, professionals and service and sales workers have seen significant employment gains. In turn, craft and trade workers, and operators and assemblers experienced no significant employment growth, and the economy experienced a declining proportion of medium-skilled workers in the primary and secondary sectors.

The analysis from Bhorat et al. (2013), pointing to growth and wage growth in the tertiary sector economic activities, suggests that liberal arts and pre-professional degrees may be valuable after all.

¹The Department of Higher Education and Training (DHET) has released an updated version of this Gazette titled "List of Occupations in High Demand: 2014" on 4 November 2014, Vol 593, No. 38174, pp1-34. At the time of publication of this article we had not had sufficient time to comment on the updated version. In the next edition the authors will analyse the updated version based on permission from the editors.

The Scarce Skills list acknowledges that many skills are transferable: The publication notes that Chartered Accountants (see p. 19) may work in other fields or occupy other general jobs. The list considers this phenomenon to be an aberration. We argue differently. Not only do individuals often have skills in many fields, but many skills are transferrable across occupations and fields. In the modern economy, it is possible for an individual to have multiple careers: an engineer may attain a post graduate qualification and then transition to a job in corporate management, academic research or a government regulatory body. Equating 'skills' with 'formal occupations' offers many drawbacks. DHET could conceptualise skills differently: in ways related to knowledge and cognitive processes (e.g. Bloom's Revised taxonomy) rather than markets and occupations, and preferably in smaller quanta. A simple, well-written, job description could offer an example.

In a democratic society, it is also important to ask, "Who is not included when we are defining skill and scarcity?." The interests of several groups do not appear to be represented in the Scarce Skills publication, including workers in the informal sector, unemployed, underemployed and casually employed workers, households in poor and marginalised communities, volunteers, and, we argue, women and individuals working in religious, spiritual health, cultural, culinary, arts and community development professions. In the dominant discourse, skill shortages (to the extent they actually exist) are defined by the market. A more inclusive approach to determining skills shortages would be to democratically identify social development priorities and educational interests as well as citizens' 'non-marketable' activities and priorities. Such an activity could result in a different list of scarce skills. DHET's narrow and non-inclusive conceptualisation of skills, outlined in this section, is intimately related to the problematic theoretical foundations on which the skills discourse rests.

Problematic theory: Is unemployment the fault of education?

Since the early 1960s the dominance of liberal economic approaches to studying the relationship between education and the economy have coalesced around a philosophy of human capital theory which privileges the productive aspects of education and those aspects which advance 'employability'. The New Growth Path, the New Development Programme and the DHET White Paper are grounded in the rhetoric of human capital theory. Vally and Motala (2014) contend that human capital theory argues in favor of empirically unsound assumptions about the relationship between education, skills and the economy. Simply put, supply-side skills development has not been shown to create new jobs and grow economies. According to Wedekind, this critique has been ignored by post-apartheid education policymakers.

Vocational education and the lead institution, colleges, are seen as fundamental to solving a problem [unemployment] that is not primarily an educational problem. There is a continual anxious hand wringing at the failures of the colleges and the VET system generally, followed by a new set of reforms that repeatedly aim at the same thing: making the colleges more responsive through curriculum reforms, capital investment and training. The latest proposals are not significantly different to previous reforms and it is likely that they will fail again because they do not and cannot address the underlying problems [of society] (Wedekind, 2014:76).

Wedekind indicates that the disciples of human capital theory can only understand unemployment as a failure of education: a scarcity of skill, a mismatch, a gap. That the existence of a 'skills gap' is the main cause for unemployment or at least a main contributory factor to joblessness is now accepted by many as the 'gospel' explanation of South Africa's employment challenges. All other factors, particularly exogenous economic factors, have tended to be treated as secondary to this fundamental problem. The Scarce Skills fits neatly into the 'skills gaps' discourse and places the problems of society on the doorstep of education. But does the discourse reflect the reality?

Biased methodology

The methods, consultations and literature review sources used to create the scarce skills publication privilege government articulated priorities, the priorities of industry and capital and the use of data privileging professional occupations.² A ranking scorecard is used to determine demand for a particular occupation based on an analysts' review of these particular sources. Some source documents appear to identify 'priority' skills by simple exhortation (i.e. the NDP and the HDRC report). Other reports draw on labor market data or stakeholder consultations. Let us accept, for the moment, the bias and methodological issues used to determine the Scarce Skills list. Let us also ignore, for the time being our analysis which points to the structured nature of high unemployment in South Africa. Accepting these limitations, let us simply consider the DHET publication to be an exercise in identifying "scarce occupations" using existing education and employment data.

We can start with a broader picture of the labor market. Unemployment data in South Africa are well known: In a labor force of twenty million people, eleven million workers are employed in the formal sector, five million workers are unemployed and over four million individuals are employed in the informal, agricultural or households sector. Unemployment, narrowly-defined stands at around 25%, while the measure of unemployment which includes discouraged job seekers is above 33% (Stats SA QLFS Q1: 2014). One source referred to by the Scarce Skills publication is Job opportunities and unemployment in the South African labor market which was produced by the South Africa Department of Labor. This publication states the number of job vacancies identified by the department (60,433 in the 2011/12 fiscal year) as well as the number of terminations (over 500,000) between Apr.-Dec. 2011. When we compare unemployment data with vacancy data – we see issues of mismatch and scarcity in a different light. Identified job vacancies are equal to about one percent of the number of unemployed workers and number of terminations is an order of magnitude greater than the number of vacancies.³

² Reports drawn on to create the scarce skills list include the NDP, the NGP, SETA skills reports, Department of Labor data, and an HRDC report on the Production of Professionals.

³ This dissonance is seen in DHET "year of the artisan" events, which lament the shortage of 40,000 artisans in South Africa.

A close review of the Manufacturing, Engineering and Related Services SETA (merSETA) Sector Skills Plan Update (MerSETA, 2013) identifies similar issues:

In the face of very limited recovery from the economic recession, and the increasing challenges facing companies competing against rising levels of imports, the demand for new skills is dropping. For 2012...slight employment losses were the reality that emerged. (MERSETA, 2013: 127-128)

An earlier report indicates that because of employment losses "people are hanging onto their jobs and labour turnover rates are relatively low" (MERSETA 2012:112). In 2012, the merSETA sector employed 653,800 workers. In 2013 a projection model used by merSETA indicates that the sector "will require a total of 4 170 people to fill new positions created in the sector and 14 540 people to meet replacement-demand needs" (2013:77).⁴

Notably, while mandated to create a 'scarce skills' list, merSETA prefers to use the term 'priority skills', stating,

Since 2012 industry has no longer unanimously supported the concept of 'scarce skills': Because of the very limited recovery from the economic recession, and the increasing challenges facing companies competing against imports, the demand for new skills has dropped to levels only slightly higher than those required to cover replacement demand. (2013:xxx)

Reflecting on its methodology the merSETA report notes, "the development of [former] 'scarce skills' lists...did not in fact reflect genuinely 'scarce occupations' with any level of accuracy" (2013:129). It goes on, stating, "the priority skills list presented in the SSP 2012/13 was not scientifically confirmed or quantified." Instead the list was based on industry stakeholders "intimate knowledge of working in the various sectors" and that added to the list were "skills that their companies were struggling to find, which are difficult to train for and which are very important for the growth of the sector," (merSETA 2013:130). Several passages in the merSETA document appear to contradict the Scarce Skills list: 'scarce' is changed to 'priority'; 'priority' is determined using qualitative methods; and merSETA speaks to job loss and slow job creation which appears unrelated to 'skill'. MERSETA does, however, comment on the "perceived poor and variable quality of newly qualified technicians and artisans" (merSETA 2014:85).

What is happening in post-school education? In 2011, public universities enrolled over 250,000 students, and graduated over 46,000 students, in Science, Engineering and Technology courses. In the same year, public FET Colleges enrolled 27,000 students in Report 191 Engineering Studies and nearly 7,000 students in Manufacturing, Engineering and Technology occupational programmes. Not to be left behind, merSETA enrolled over 6,000 individuals, and produced over 4,000 graduates in its Learnership and Skills Programmes. In the same year, over 100,000 NCV learners were enrolled, many of them in engineering studies courses, in public FET Colleges (DHET 2013).

The dissonance between the DHET Scarce Skills publication, the merSETA analysis and post-school education data is disconcerting. The Scarce Skills publication claims that 'electrical engineer' is the number one scarce skill/occupation, but we don't know if this is because we have a severe shortage in the number of electrical engineers; because merSETA stakeholders identify 'electrical engineer' as a priority skill (i.e. the demand may be for a small number of high-skill workers); or because electrical engineering has been identified as a "high salary and wage growth" profession (DHET 2014). DHET data show that the education and skills 'pipeline' is producing a lot of engineers. Does this mean that next year our shortage of 'qualified' electrical engineers may turn into a surplus? What is certainly clear is that filling the 60,000 vacancies (determined by DoL) or the 19,000 projected vacancies projected by merSETA, in short responding to market identified vacancies, is a totally inadequate policy response, if in fact government policy seeks to respond to the needs of the over seven million unemployed and discouraged workers in South Africa.

Post-schooling institutions and DHET leadership can and should play a leading role in human development, community development and skills development in South Africa. We hope this critique identifies the severe problems with DHET's current policy trajectory and creates space for a broader and more democratic discussion of skills and skills development.

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David Balwanz - CERT

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- SIPs stands for Special Infrastructure Projects

⁴ Labor projection models are often poor predictors of future employment. Notably, the 2012 merSETA publication had previously offered a baseline projection of requiring 27,000 new workers – 10,000 higher than the number identified in the "update" publication.

The Size and Shape of the Public and Private Post-School Education and Training System

What are the post-school learning opportunities available for out of school youth and adults?

Ronel Blom

The appropriate size and diversity of the Post-School Education and Training (PSET) sector has been the subject of some debate in South Africa. On the one hand, there is the annual scramble for the available spaces at public higher education institutions, suggesting that South Africa does not have enough post-school opportunities available and consequently, that we need more institutions; and on the other hand, we have hundreds of thousands of students who do not make the grade and who are not eligible for entry to higher education.

Cloete (2009) also points out that in addition to those students who pass the National Senior Certificate (NSC) but who are not eligible for entry into higher education, we should add those who failed the Grade 12 exam (147 973 in 2011 for example), as well as those who have left school prior to reaching Grade 12. It is estimated that only half of the cohort that starts in Grade 1, continues

While it is encouraging that the number of people in South Africa with no or low levels of schooling is decreasing, the high number in 2011 with 'some secondary' (33.6%) and 'Grade 12' (28.2%), compared to only 12.3% that have achieved a higher education qualification, is indicative of the great need for some form of alternative post-school opportunities. In addition, the people within 'some primary' and 'complete primary' categories may, while smaller in number, also require further learning opportunities.

However, through a variety of policy decisions and directions in the last 15 years, including the restructuring of the public PSET system, which previously consisted of universities, technikons, technical colleges and colleges of education, police, nursing and agriculture, there has been 'a fundamental loss of places and spaces, of educational opportunities for school-leavers' (HESA, 2011: 4). The now well-known 'inverted pyramid' which characterises the South African PSET system, is one consequence of this restructuring. Lolwana (2010:14) puts it as follows:

Post-secondary education in developing countries takes the form of an expanding and widening pyramid, with a widening college system at the base and a somewhat smaller university sector, each growing as more and more progression routes are made available. In the South African education system, the widening college base has disappeared, leaving the university system to cater for all post-secondary education needs.

These figures are confirmed by the 2011 census. The 2011 census provides a glimpse of the scale of PSET opportunities that may be required in South Africa:

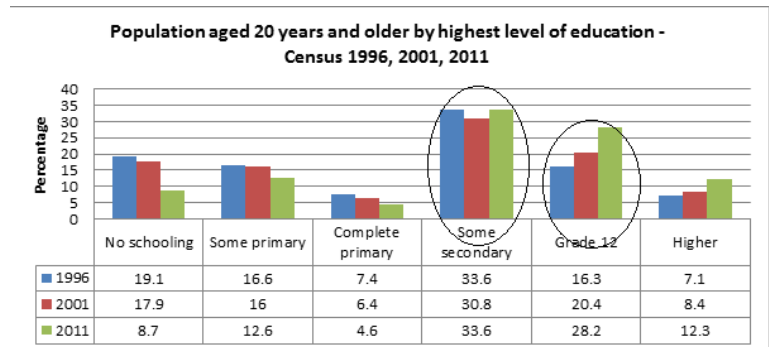


Figure 1: Cohort in need of Post-school Education and Training Opportunities From Census 2011, Key results, Stats SA

Cloete (2009) therefore argues that it is not more universities that are needed, but more post-school options at pre-university level. However, the public PSET sector has been contracting, while on the other hand, the private PSET sector has seen tremendous growth. The diminishing public college sector has left a vacuum which was soon filled by private institutions.

Over the past number of years, the regulation of private post-school education has been vastly improved. However, partnerships with private institutions must be mindful of a 'fly-by-night' element, of the institutions' profit motive and ideological bent, which may be at odds with the 'public good'.

Apart from the large (and growing) number of people who need opportunities for further learning, it is also recognised that we need a diversity of opportunities – 'post-school education and training' is now understood to include education and training ranging from basic education (for the cohort who have not finished primary or secondary schooling), and pre-university, as well as university education. The DHET (2012: 1) defines 'post-school' as 'all education for people who have left school as well as for those adults who have never been to school but require education opportunities'. There is therefore a clear need for general, as well as vocational and occupation-directed learning opportunities for both out-of-school youth and adults. Furthermore, these learning pathways must lead to meaningful further learning opportunities through articulation and progression routes.

It is against this background that the Centre for Researching Education and Labour has initiated a study in respect of the size and shape of the post-school education and training system in South Africa.

1. Purpose of the study

The study will be conducted in different phases, with the earlier phase informing the next. The current study has the following main purposes:

Scoping of public and private provisioning across the PSET system in terms of institutions of learning with the aim to a) determine the size of the sector; b) to develop a typology of institutions; and c) assess the diversity of opportunities available, including opportunities at:

- ♦ Public and private universities/Higher Education (HE) institutes;
- ♦ Public and private Further Education and Training (FET) colleges (now called TVET colleges)
- ♦ Public and private workplace education and training centres.

The scoping encompasses all accredited institutions. For the first stab at the scoping, no distinction was made between institutions offering education and training to the pre-employed or to the employed. In terms of the programme offerings, the initial scoping is limited to credit-bearing qualifications of Certificate and Diploma (NQF 2 – 6) levels.

Emerging from the above, the extent to which diverse opportunities are available and the nature of such opportunities, at different levels of the system, was assessed.

2. Methodology

A number of studies have been undertaken to assess the size, shape and nature of the PSET sector. However, most of these studies investigated only a segment of the sector. The Sector Education and Training Authorities (SETAs), for example, undertake annual Sector Skills Planning (SSP) studies in relation to a specific industrial or economic sector, but these studies are not necessarily comparable across SETAs or other quality assurance bodies. Even if they were, the results are certainly not quantified into a single data set. The result is that if we do not have an overview of the system. Further, it is difficult to determine where the overlaps exist, or for that matter, where gaps are in relation to what we consider necessary for a vibrant PSET system.

The primary methodology was a desk-top analysis of data available in the public domain, including data from the Department of Higher Education and Training, the SETAs, Umalusi, the Council for Quality Assurance of General and Further Education and Training, and the Council on Higher Education (CHE). Where data was not available on public websites, quality assurance bodies were contacted directly for information, not all of which were willing to share their institutional data. This was out of concern that the data will be distributed to the general public. Nevertheless, this has resulted in gaps in the data for the study.

3. Findings 3.1 On the data

A comprehensive view of the public and private education and training sector has been difficult to ascertain due to weak data management practices throughout the system. The intention for the South African Qualifications Authority's (SAQA's) National Learner Records Database (NLRD) to be the main repository for information about public and private institutions has been complicated by information technology challenges in terms of the format of datasets to be uploaded to the NLRD, delays in uploading, and non-compliance by the bodies responsible for the datasets. SAQA's data are therefore often outdated and incomplete – it is for this reason that data were collected directly from the various quality assurance bodies and, in respect of public institutions, directly from the DHET.

Data on the private education and training sector in particular proved problematic: 'The data on private post-school education is both a goldmine and a minefield. It is evident that a substantial amount of data is available, but that very little systemic work has gone into collecting data for the sake of understanding the whole of the sector' (Blom, 2011: 12). One of the major difficulties is to determine how many institutions are active in the education and training sector. An important activity, as part of this study, is to ensure that all possible duplications are removed. This kind of data-cleaning is in itself complicated by accreditation practices, specifically in respect of the practice of primary and secondary, or indeed multiple accreditations with different quality assurance bodies

3.2 The number of education and training institutions

Name of Authority	No of Institutions	Name of Authority	No of Institutions
AgriSETA	358	SASSETA	No data available
BankSETA	32	SERVICE SETA	1747
CATHSSETA	304	TETA	No data available
CETA	177	UMALUSI	448
CHIETA	No data available	W&R SETA	No data available
ETDPSETA	1200	CHE/HEQC	87
E(W)SETA	No data available	DHET (colleges)	50
FASSET	No data available	DHET (universities)	23
FOODBEV SETA	114		
FP&M SETA	1301		
HWSETA	105		
INSETA	81		
LGSETA	No data available		
MERSETA	555		
MICT SETA	585		
MQA	133		
PSETA	80		
SABPP	49		
SANC	232		
SAPC	25		

Taking into account that there may be much duplication, i.e. through education and training institutions which are accredited by more than one quality assurance body, it is clear that the sector is substantial. Also, it is probably more correct to talk about sites of learning, rather than institutions because both public and private institutions often have multiple sites – then the above figure increases to approximately 7,000 sites. Whether this means that the sector is of an appropriate size, is not yet clear.

3.3 Geographical spread of education and training institutions

Post-school opportunities are not only about the variety of types and levels of qualifications available, it is also about the extent to which such opportunities are accessible by people living in rural, semi-urban or urban settings. While it is expected that the large urban areas will have many more opportunities available, in sectors such as agriculture, for example, education and training institutions may be found in very rural settings.

To assess whether the size and shape of the post-school sector is appropriate for the needs of the country, the actual numbers matter less than whether the sector meets the needs of as many as possible aspirant students where they live.

Some economic sector institutions are found only in the economic hubs of the country, for example the banking and insurance sectors, while others are more spread out across the country, for example the nursing and mining sectors.

Of particular interest is the geographical reach of private further education and training colleges due to the many branches and/or franchises of the larger colleges, for example Damelin and Boston Business College. In many small towns, these are the only post-school institutions available. However, most of these, as in the public sector, are found in Gauteng. See below:

Comparing post-school opportunities across public and private colleges, the following emerges:

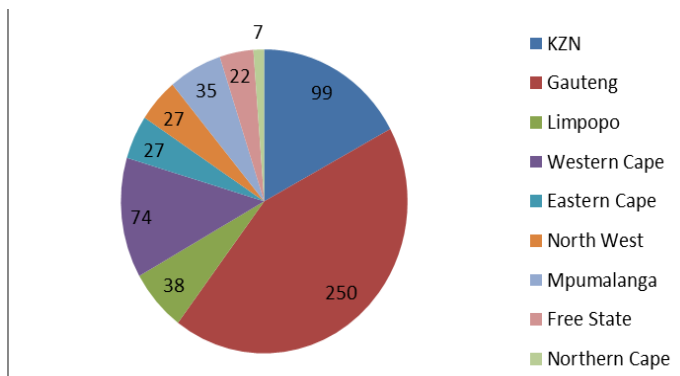


Figure 2: The geographical reach of private post-school institutions

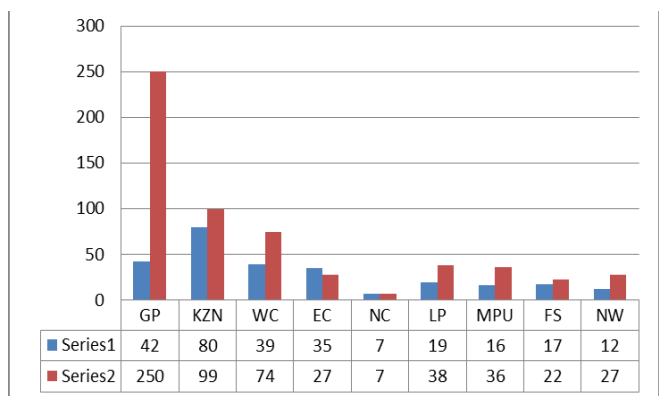


Figure 3: The geographical reach of private and public colleges

Key: Series 1: Public colleges; Series 2: Private colleges

3.4 Qualifications in the post-school sector

There are two main types of qualifications in South Africa: unit-standard based qualifications and curriculum-based qualifications. The former are associated with occupational training or skills development, often in the workplace; and the latter with (largely) face-to-face, full-time programmes offered by colleges and universities. A third type of qualification, under development by the Quality Council for Trades and Occupations (QCTO) will be curriculum-based occupational qualifications. This type is excluded for the moment as no or low uptake is evident at this stage.

In addition to these types mentioned above, there are also 'legacy' qualifications. These qualifications are offered by mostly public and private colleges and are known as the Report 191 or NATED qualifications. The artisanal type qualifications, and N4 – N6 post-school qualifications fall in this category. All three types of qualifications have been analysed for this report.

While some unit-standard based qualifications have a high uptake in the various economic sectors associated with the SETAs, many of them have a very low uptake, often with only one provider, for example the British American Tobacco South Africa Company that offers cigarette making and related qualifications.

The curriculum-based legacy and new qualifications such as the National Certificate: Vocational (NCV), have a high uptake. In addition, the 'legacy' (NATED) qualifications are also still offered widely by both public and private institutions, particularly in relation to the following fields of learning: engineering studies; electrical studies; business studies, including business and financial management; human resources; secretarial studies; and hospitality and catering; tourism; educare and clothing production.

The levels of qualifications vary across the sectors. Some sectors, such as the agricultural sector, for example, offer many National Qualifications Framework (NQF) Level 1 qualifications, while the mechanical engineering and related design sector offers more qualifications at Levels 2, 3 and 4. Private higher education institutions offer many Level 5 and 6 qualifications, in contrast with the public university sector, that offers qualifications mostly at Level 6 and up.

3.5 The availability of learning opportunities in South Africa

This study is more than an attempt to understand the appropriate size and shape of the post-school education and training sector. Its explicit purpose was to assess the extent of learning opportunities available for post-school youth and adults. It is clear that the need for such opportunities is vast.

Thus, notwithstanding the gaps in the data, it is also clear that the system encompasses thousands of education and training institutions, all of which has the intention to make learning opportunities available. However, while most sectors in the education and training system, especially in relation to the SETAs, offer an array of learning opportunities, it is not as clear as to how many opportunities are available for the pre-employed. It is evident that SETAs have established extensive training systems for employees in their respective sectors, but that these learning opportunities are not necessarily readily available to pre-employed youth who are not associated with their sectors.

Therefore, the main avenues for especially pre-employed youth to obtain education and training at a pre-university level, are through the public and private colleges and private higher education institutions. The question to be asked then is whether this sub-section of the broader landscape is of the appropriate size and shape. Furthermore, the question should also be asked whether the kinds of learning opportunities are diverse enough to meet the needs of pre-employed youth and adults.

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4. Next steps and further research

The immediate next steps include:

- Finalise data capturing and analysis per sector
- Identify and remove duplications across sectors
- Verify data per sector and effect 'clean-ups'
- Undertake deeper analyses of data as required

Concurrent with the above, the next phase of research will be conceptualized and initiated through identifying a sample of public and private post-school institutions to investigate: -

The students:

1. Who are the students attending these institutions (demographical information)?
2. Why they are attending the institution (and not any other institution)?
3. What are their throughput and success rates?
4. What are their destinations?

The institutions:

1. Why are they considered accessible?
2. What are the modes of delivery?
3. What quality assurance measures are in place to ensure quality?
4. Any other relevant and contextual factors?

Ronel Blom - REAL

Industrial Policy: The Influence of the ‘Knowledge Economy’ on the Manufacturing Sector

Palesa Molebatsi

Introduction

The prevailing notion of a ‘knowledge economy’ highly influences policy work around pathways to industrialisation. The increasingly dominant mainstream view that the new global economy is driven by innovation and creativity, skills and knowledge is almost taken for granted by governments the world over (Wolf; 2002). Increasingly, knowledge is viewed as the core stimulus for industrialisation and economic growth. Strong emphasis is therefore placed on technology investments, the establishment of high-technology industries and the creation of highly skilled labour as core ingredients for stimulating wages, employment opportunities and global competitiveness. These economic approaches in the developed world are also being pursued in developing nations, such as South Africa, where heavy attention has been given to strengthening the manufacturing sectors and remedying the “de-industrialization” that has stifled the desired domestic economic expansion.

Tregenna expresses the concept of “de-industrialisation” as the declining share of the manufacturing sector in GDP and/or employment - where manufacturing is not synonymous with industrialisation, but is regarded as possessing special characteristics rendering it a potential lead knowledge sector and engine of industrial growth (2008). Overall, South African growth per capita has been stagnant despite its increase in recent years; and unemployment remained high – further constraining growth and increasing the importance of labour-absorbing industrialisation. The tension between the need for ‘high-skilled’ labour to achieve a ‘knowledge economy’ and the need to address the South African unemployment crisis by expanding labour-intensive manufacturing and absorbing ‘low-skilled’ labour is a crucial discussion for policy-makers.

South African Industrial Policy

The sluggishness and slow decline of the South African manufacturing sector is generally blamed on failed structural transformation as a result of several factors including: poor Macroeconomic policy (e.g. inappropriate trade liberalisation), out-dated technology and constrained input access, rising global competition, poor skills, etc. This multiplicity of factors makes South African industrial policy a large, multi-departmental effort that must stimulate economic expansion, while also addressing social difficulties such as increasing the economic participation of historically disadvantaged people and marginalised regions. This often means that seemingly contradictory policies are pursued by government. South African industrial policy is comprehensively set out in the DTI’s (Department of Trade and Industry) Industrial Policy Action Plan (IPAP), which outlines the transversal and sector specific programmes and interventions that the department has committed to for economic growth. “Government policy set out in (IPAP) and other documents seeks to ensure a restructuring of the economy to set it on a more value-adding, labour-intensive and environmentally sustainable growth path.” (DTI; 2013: 11).

To do this the DTI strives towards achieving specific objectives that include among other things: promoting diversification beyond traditional and non-tradable goods and services to compete in export markets; improving the African continent’s productive capacity; ensuring long term intensification of South Africa’s industrialisation process, and the movement towards a knowledge economy; etc. (2013: 11). These represent a brief overview of current domestic industrial policy in which both the ‘knowledge economy’ and the importance of a ‘labour-intensive’ manufacturing growth path are repeatedly highlighted and discussed, demonstrating the enthusiasm for these two themes.

Capital-Intensive versus Labour-Intensive Policy Goals

While policy statements present the need for both labour-absorbing growth as well as capital-intensification in the manufacturing sector, de facto policy support has promoted capital-intensification over labour-intensive manufacturing (Black; 2012). The promotion of and over-emphasis on the ‘knowledge economy’ has meant that attention is placed on creating an environment conducive to knowledge-work and knowledge-transfer for industrial purposes. As a result, manufacturing policy measures are predominantly aimed at stimulating the low capacity to innovate in order to overcome the weakness that South Africa (like numerous other developing countries) is burdened with. One set of policy responses regarded as essential for stimulating industrial expansion through the manufacturing sector prioritises skills and innovation policies aligned to sectoral needs. This places increasing pressure on universities to produce industrially relevant technology that is of direct and immediate use to the private sector, while also producing quality graduates with the skills to support this objective going forward.

One example of the bringing together of universities and business by the South African government is the “Technology Stations Programme”, run by the Department of Science and Technology (DST) through the Technology Innovation Agency (TIA). The Technology Stations Programme supports the technology needs of Small Micro and Medium Enterprises (SMMEs) in an effort to make them more competitive. At twelve universities of technology across the country there are Technology Stations with high-skilled research staff (both from inside and outside of the universities) who offer technology services such as the provision of tests, analysis, training, technology demonstrations and product design to the Small Micro and Medium Enterprises (SMMEs) (TIA; 2014). In this context, skills development in the areas of science, engineering, technology and technology innovation is pursued through programmes designed to attract and increase the human capital in these fields (TIA; 2014). Through this, an attempt is made to exploit the supposed relationship between education (or high-skilled labour), research output, and economic growth. This type of hybridisation and integration of organisations creates “Knowledge Transfer Organizations” such as the Technology Innovation Agency where universities, industry and government meet to collaborate.

This is but one example of the way in which knowledge economy pursuits manifest themselves. Viewed in this light, manufacturing has the capacity to become a lead knowledge economy sector if skills formation as well as research and development (R&D) projects will stimulate technological advancement. Tregenna emphasizes the importance of Research and Development (R&D) and human capital in new endogenous growth theories (2008: S176). It is this rationale that encourages the South African government to pursue targets such as an increase in R&D spending that will bring this expenditure to 1% of GDP (DST; 2013), a target which was set back in 2008 and still has not been met.

While it is true that some of the increased focus on heavy industry and capital-intensive manufacturing (and hence R&D as well as skills development to support technological advancement) has been because of the relatively poor performance of labour-intensive manufacturing sectors, policy statements nonetheless point out the need to strengthen and expand the labour-intensive sectors, particularly as rapidly growing sectors are not necessarily employment creating. As Tregenna highlights, there is often a potential trade-off between sectors that are technologically advanced and highly productive, and those that are more-labour-absorbing and less productive (2008: S195). Black (2012) very persuasively suggests that although South Africa's comparative advantage has been in capital-intensive manufacturing sectors rather than in the labour-intensive sector, economy-wide efficiency can be achieved if the mass of un-used labour available to South Africa can be better mobilised (2012).

Despite the fact that the manufacturing sector is glorified as being the sector in which learning by doing and innovation are highly prevalent, and where most technological change takes place, for the South African case, manufacturing is also a sector in which a substantial employment multiplier exists (Tregenna; 2008). This makes the sector an easy target area for expansion that will lead to an increase in employment opportunities, stimulating domestic demand and growth. Unfortunately, the increase in capital-augmenting labour-displacing technological change in manufacturing (among other factors) has been damaging for employment as a result of the focus on strengthening heavy industry (Tregenna; 2008). Black (2012) echoes Tregenna's sentiments by highlighting that manufacturing may not be a major source of employment in most middle-income countries, but has the ability to alleviate the challenges associated with a poorly-skilled labour force in South Africa (2012). This is an undoubtedly desirable outcome given the frequent suggestion that the cause of high levels of domestic unemployment is a lack of required skills (DTI, 2013). An expansion of low-skill jobs in manufacturing therefore has the potential to contribute to increasing employment because the low-skilled labour employment multiplier in the manufacturing sector exceeds that of most other industrial sectors (Tregenna; 2008). If the focus is on mobilising 'low-skill' then the "skills gap" said to exist (because the South African education system is not producing people with the required skills for the private sector (Allais; 2012)) potentially becomes less of a problem in that less investment is required for skills formation than is the case for investment towards knowledge economy skills. In fact, Tregenna goes as far as suggesting that the South African capital-intensive manufacturing path is premature:

"(The low employment share of manufacturing in GDP is) indicative of a distorted development path in which South Africa 'leapfrogged' from a minerals and resource-based economy to capital intense-heavy industry without going through a period of development of labour-intense light industry." (Tregenna; 2008: S194).

Conclusion

In her book, *Does Education Matter (Myths about Education and Economic Growth)*, Wolf makes reference to the 1980s, when some analysts divided the world into 'high-skill' and 'low-skill' economies, where the former is characteristic of a knowledge economy (2002: xii). It is this simplified analysis that places education and skills (for knowledge transfer) at the centre of industrial policy today and leads developing countries to strive towards high-skill equilibrium in the manufacturing sector, even when the 'efficient' policy action is to fully exploit the available 'low-skill' labour. The global trend is to assume the existence (or coming into being - depending on a country's stage of development and capacity to innovate) of a knowledge economy. This is despite debates taking place amongst economists and sociologists around the extent of the move towards the knowledge economy (Livingstone and Guile; 2012). This attempted 'leapfrogging' of the South African manufacturing sector perpetuates unemployment which then further constrains growth. Moreover, it is not surprising that industry and policy makers perceive an extensive lack of the skills required for growth, even beyond what is the case in reality. This is because attempting to 'leapfrog' towards an industrial 'knowledge' economy leads them to write-off the labour that is available and seek out the sort of scarce, 'high-skill' labour required for their knowledge economy goals.

In agreeing with Black (2012), industrial policy should be less concerned with 'technological upgrading' and 'innovation base expansion', but should aim to promote the economy-wide efficiency that is attainable through absorbing the 'unskilled' and 'low-skilled' domestic labour force (2012).

Palesa Molebatsi - Real

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A young community-based researcher's journal reflections

Asanda Sobuza

Tuesday, 24-06-2014.

After arriving from East London the previous day, we set out to find Rob Small, secretary, co-founder and resource mobilisation director of Abalimi Bezekhaya. Rob, an inspirational organic farmer, led us along with a group of Cape Peninsula University of Technology delegates, a young livestock farmer and an SABC contractor to a site in Khayelitsha. The place was owned by the government or at least situated in a state owned piece of land. There, in the mist of contradicting images of shacks and RDP houses, was a place where people could 'farm' the land and grow vegetables to feed their families and sell to community. Rob told us about the history behind the place. The place had three ship containers for storage, office space and admin. It had two huge JoJo tanks for water storage and an irrigation system that catered for the whole garden. The security around the garden was tight. It was next to a state owned site and had high fences. Rob assured us that the place was rarely broken into.

We then went out to Nyanga township to visit Mama Bokolo, a micro-farmer and Nyanga Peoples Garden Centre operator. The garden was beautiful, filled with a variety of vegetables and a good keeper that made sure it blossomed beyond expectations. Mama Bokolo told us about the daily running of the centre, which was basically like any organic centre does. They work on grooming the plants, sell seedlings, and manure and water the plants. She has compost made of paper and another that consists of a mix of other things. Within the same compound, she has three worm farms. They contribute as worm juice/tea that can be sprayed directly to the crops once a week or so.

After that, it was time for Phillipi, where we were scheduled to meet Mama Christina Tenjiwe Kaba, a member, co-founder and Field Ops Director of Abalimi Bezekhaya. One of the establishments is situated in The Business Place Phillipi.

The place is really an awesome business district for upcoming visionaries. From containers that house restaurants, fish farming, sewing establishments, to a small packaging firm for Harvest of Hope. These are just some of the business ventures that are here and not all of them. Within the same compound is a huge building that is being renovated to house more people who want to open small establishments. After seeing the place, we went out to lunch in one of the container restaurants that just opened and was owned by an Eastern Cape born Mr May.

Wednesday, 25-06-2014

We set out to again to meet up with Mama Kaba. We were supposed to be interviewing her and four of her staff. Unfortunately or fortunately, depending on how you take it, Mama Kaba was busy with meetings, visits and other stuff so she prepared one of her staff members, Liziwe to take us to a garden in Khayelitsha. It was where we met Liziwe, Zodidi and a handful of workers in the centre. It is named Masiphuhlisane (Let us develop each other). On one side of the Masiphuhlisane Centre you have the Abalimi Bezekhaya section that makes up a three quarter garden and a small apartment for storage space and office use. On the other side was a block of apartments that housed various centres ranging from Social Welfare, Workers World Media Production and a few others. From Masiphuhlisane, we went to a piece of land that was farmed by Abalimi Bezekhaya. It was situated in Khayelitsha, near a public park. The gardens were nice and looking good. They grew various things like spinach, cabbage, and spring onion.

From there we went to the township of Makhaza and explored a chain of gardens that fall under Abalimi Bezekhaya. There were many and they were really looking good and organic green. We drove deep into the township of Makhaza to see a garden in a school called Siphumelele High School. Apparently the principal was kind enough to let Abalimi Bezekhaya farm this place at the back of their school. Like the many others we saw, this place was magical too. We drove Liziwe back home after we had lunch and that marked the end of this day and we went home for an early evening.

Thursday 26-06-2014

We woke up to prepare for an interview with this guy from Workers World Media Production so we left the house around 10:30am to WWMP. When we got there, the place was looking good and looking like a museum rather than a Media Company. The interview went well. [It was recorded]. Kind enough of him, he offered a short tour of the company. This place was really revolutionary. It was painted with struggle icons such as Steve Biko, Solomon Mahlangu and the likes. The whole thing ended around 13:20pm. Once again we went to lunch and had an awesome afternoon.

Friday 27-06-2014

We had to work our way to the Abalimi Bezekhaya offices in Phillipi to interview Mama Kaba and her staff. When we got there, they were in a meeting. Mama Kaba asked for us to be let in and we were let in by Zukiswa Qutyelo, a field team administrator. We went upstairs after we were told we would get 15minutes of time with each member. We were going with the flow. We started interviewing Liziwe who occupies an office on Abalimi Bezekhaya. Such an inspirational soul. Next up was Zodidi Langa, a micro farmer and field worker. Mama Kaba was the last one. [All of these were recorded]. After the last one was done. We said our goodbyes and went straight to the airport for departure.

What I saw, thought and learned

When one speaks of Cape Town - Khayelitsha, Nyanga, Gugulethu and more, things like gangsterism, poverty and flooding of informal settlements overcrowd the image of the place. Despite all of these negative things, there are still some things that bring hope to these communities. Farming on sand might sound like a 'ludacris' thing to many but to people of Khayelitsha, Phillipi and Nyanga - it is the only way to escape socioeconomic issues. With organizations like Abalimi Bezekhaya and Workers World Media Production doing their part, hope is still there. Growing up in Eastern Cape, planting and maintaining a healthy garden is primary education. It's in the way our forefathers saw the importance of balancing nature and human survival. The people in these townships saw earth, nature and human civilization as one. They respected the soil and in return the soil came bearing gifts. Of course it wasn't a walk in the park, they had challenges. Part of those was from government. An 'education qualification' somehow becomes the red tape for a lot of people trying to make a decent living for themselves and family

When you make your way through these townships, people live in harsh conditions, in shacks, poverty stricken areas and are 'uneducated' according to today's NQF system. You would think all they do is sit and wait but no! they make ways to sustain themselves through all that. Mama Kaba is a living example of this. Having had a standard Two with no certificate to show, she was certain that she had no space in today's world. But amazingly she managed to get a driver's license, a job that required a grade12 and the organisation owns four cars through this. Another interesting thing is that even though you have all these shacks and unemployment infecting the community, they make it a point to promote Early Childhood Development. All around the township you find children parks with children playing and having a good time. These parks are well maintained. All this is to say that people are doing something, with a little support here and there; these people can grow their livelihood.

Asanda Sobuza - CIPSET

Report: Youth Research, Learning & Advocacy Team

Khanyisile Ngalo

The Youth Research, Learning & Advocacy Team (from henceforth YRLA) features four teams of roughly 8 – 10 young fieldworkers located at different sites and lead by a junior researcher from one of the four organisations participating in the research project – Emerging Voices II – ‘Building A Progressive Network of Critical Research & Public Engagement: Towards a democratic post schooling sector’ (Education Policy Consortium).

The team was spread across Alice; Ginsberg in King Williams Town; and Nompumelelo, Quigney and Mdantsane in East London. The aim of the team was to engage the core questions of the research project guided by a research process of their own design (not bound by the methods, tools and approach used in the rest of the research project), and to provide some insights into the core questions from the perspective of the lived experiences of young people. The two overarching responsibilities of the team were to build its own analysis of the critique of the current post schooling system, and provide alternative imagination for Post-School Education and Training.

This article shares some of the findings, paying specific attention to education and cultural identity. It is important to note that these findings are only a small set of the data, as the data is still being analysed towards a final report. The section below expounds on the method used to collect the data and the process of how the data was analysed.

Method

Data was collected over a period of 3 months. Each month, every member of the team produced the following: (1) a **biography** documenting their experience of the post schooling sector, their analysis of it and ideas to transform it; (2) a **summarised journal entry** of emerging ideas about the post schooling sector; (3) **audio-recorded youth stories** about their experience and analysis of the post-schooling sector; (4) **transcriptions of group discussions** on youth experiences of the post-schooling sector and finally (5) a **creative piece** (poem, drawing etc) reflective of their experience and imagination of the post schooling sector.

The interviews were voice-recorded, transcribed, coded and analysed. In practical terms this means the following: (1) the interviews were transcribed onto a word document, (2) transcripts were reviewed, (3) emerging themes were identified from the data sets, captured onto index cards and numbered, (4) responses corresponding to the themes were highlighted, cut out into paragraphs and sentence strips (responses) and allocated accordingly to their respective categories and (5) a narrative was extracted from the paragraphs and sentence strips to present the data. The section below unpacks the preliminary findings emerging from the data that was collected by this team during this period.

Preliminary Themes

In engaging with youth regarding their critique of the post schooling education training and development, the following statements were common in their articulation of how teaching and learning feels like to them as students in the post schooling sector:

Language of teaching and learning is a challenge.

Teaching and learning is boring.

All these points are described under the theme education, culture and relevance. Findings and analysis of these lived experiences is described below.

Critique: Education, Culture and Relevance

In *Changing Education Paradigms*, Robinson (2008) presents the challenge of education in the modern age by way of questioning its relevance to the communities it is meant to serve in a constantly changing environment. Robinson (2008) asks: “How do we educate our children so that they have a sense of cultural identity and so that we can pass on the cultural gene of our community while being part of the process of globalisation?”

The first part of the question points to an important aspect or role of education that is least spoken about in mainstream education circles, i.e. the role of education in reflecting the cultural identity of the community it serves. While Robinson (2008) is not clear on which community he is referring to, this paper assumes that the community referred to is not only that of institutions of learning (in this case, the post schooling sector) in themselves but also that of individual groups as a microcosm of broader communities (places students come from and the realities they are an explanation of).

The latter community begs a different question which is an inverse of the first of the question, diffusing the power discourse embedded in the assumption ‘we educate our children’ by way of juxtaposing it with ‘our children educate us’. This then says the post schooling sector should consider what students bring to the teaching and learning experience. Cultural heritage is one, and the knowledge systems that are used to pass on this information. Language is one way through which knowledge is passed on. Language of teaching and learning is one of the things that were critiqued by students about the post schooling sector. This is what they had to say:

Language of Teaching and Learning is a Challenge

Indima ye language esetyenziswa eskolweni idla-la yiphi indima ebafundini?

“Ja I can say English iyabetha nhe ebafundini, because kubuzwa umbuzo then umntu angakwazi ukuza guqulela into kwisixhosa then aphele ephendula into engeyiyo angayivanga na kakuhle, kanti if ebeknowu caciselwa ngesixhosa then ebeknowu kwazi ukuza phendulela. Iincwadi mayi bhalwe nange siXhosa bra”.

Inganceda njani imfundo ekuhlani ngaphandle kwemisebenzi yintoni eyizisayo?

“Inganceda Bra kakhulu eku hlaleni ngehlob lokba umntu akano kwenza nje nanton na e.g. umntu aveske ngo lahla nkunkuma estratwen, ne huggies endleleni, kutshisa emini nto ezi ndaka batu baphefumla moya omdaka. Yonke into yenziwa kungaz after effects zento umntu ayenzayo”.

Injani relationship yesikolo nolwazi lwethu lwemveli namasiko? Ingaba ikhathalelwe iculture yethu ezifundweni and ibonakaliswe?

“Ha a Bra ayikhathalelwanga, instead ku dlalwa ngayo qha. Ibhalwa ezincwadini qha ngoku. Ulwazi lwemveli alu ncedisani kakhulu nathi, because izinto zimanen ngo tshintsha therefore wena unga bamba into yakudala kant lanto ngok ayisenjalo”.

Summary

When asked about the role played by the language used at their FET College on students, a student from EMC (FET College in Alice) ascertains that English presents a challenge in understanding and is a barrier in articulating understanding because a lot is lost in translation. He believes that if prescribed text books were available, and some of the content explained in Xhosa, this would help facilitate learning. He also believes that it would help the community a great deal if they were educated on, for instance, ways through which they harm the environment – like littering and general pollution – which in turn cause illness. He believes the general community would benefit from being educated on the effects of their ignorance-driven actions. In his opinion, indigenous knowledge and the rich wisdom of our culture lives only in historical books. Cultural practices and traditions, he says, are no longer observed. He also adds that culture is dynamic and its relevance, because of the above mentioned, has become impossible to grasp.

The next section elaborates on the second statement: teaching and learning is boring.

Teaching and Learning is Boring

“As much as sikhula sixelelwa that imfundo ibalulekile blah blah...blah, nathi ke siyayibona ke shame le importance yayo but Sana it can be super BORING xa ithanda vha. If institutions keep this up, trust me soon some of us will become drop outs very soon”

But my dear uh in this case why are you bored? Is it the kind of lecture given or just everything about imfundo that bores you?

“Lol hahahaha, yhuu hayi sana the process of getting up from your bed in the morning and sit in a chair, in a desk and listen to someone, hayke avele abhore kwayena to such an extent that awuva kwale ayithethayo”.

“Now I don't really feel like attending my next class”

Summary

The student is critiquing the quality of teaching and learning. She does not feel engaged and, given that she has played her part in waking up early to show up (preparing) for her lectures, she is displeased with lecturer's lack of preparation. While she sees the importance of getting an education as constantly re-emphasized by society, she also finds teaching and learning to be a tedious experience and cautions institutions of learning to stop being boring because it will probably be the reason why she would contemplate dropping out. What does all of this tell us about the post schooling sector? The section below provides an analysis about what some of the students are saying about post schooling and explores alternative imaginations.

Discussion and Alternative Imaginations

Consistent with Robinson's (2008) critique of education, the second interview shows that teaching and learning is an anaesthetic experience, meaning – students such as the one in the interview above feel disengaged during lectures, their senses feel shut off, they deaden themselves to what is happening around them. When students were asked what could be done to create a different experience of teaching and learning, two suggestions came up, briefly:

education should be physical

art should be used as a tool to educate

The next section provides some of the insights from the interviews with the students.

Education should be physical

When asked to describe of the challenges at their FET College, one of the students at EMC said:

Okok qala ungene esikolweni before ukufunda nhe then into ze sport ziya clashana nge xesha lo Attenda then that is where you decide ba uzoya kweliphi icala and remember if uye kwi sport uya phazamiseka kwi classes nhe.

[in summary, the schedules for sport and lecture time are clashing, giving students an ultimatum of choosing one over the other]

“Students should be given an opportunity to literally move beyond classrooms, libraries and research labs where they try to cram or decipher complex concepts of which some do not even speak to their daily needs. There is a need for more meaningful ways of learning where students can draw information from many sources and analyze that information on their own. There should be room for self-expression”.

Use of art as a tool

“I regret going to school. I wish every child finds themselves, their talents, their will and determination way before their success can be defined by paper.”

Arts should be integrated with traditional teaching in which students can demonstrate and construct understanding in art form. Art makes us aware of the existing problems in society and it promotes academic achievement, social, emotional and spiritual development, and enhances critical engagement about issues that affect us in society”.

Robinson (2008) posits that the arts provide one solution to the problem of anaesthetizing students. According to Robinson (2008) the arts especially address the idea of aesthetic experience of teaching and learning. An aesthetic experience is one in which (1) your senses are operating at their peak, (2) you are present in the current moment, (3) you resonate with the excitement of this thing you are experiencing, (4) you are fully alive.

Conclusion

In conclusion an education that retains people’s cultural identities should provide platforms for creative self-expression and allow people to express themselves in their language of comfort. While articulated differently, it can be conferred that the students are advocating for an education that is identity conferring and also an aesthetic experience of teaching and learning. A good education enhances the harmonic development of a person, not just the intellect. It should not be that the thing that is said to enhance your quality of life is the very thing that cripples our creativity. Without room for creative self-expression, it is difficult to develop the capabilities needed for young people to become whole, healthy, productive and active citizens.

Khanyisile Ngalo – CIPSET

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Knowledge through deep and systematic study and by engaging with communities

Enver Motala

Introduction

Whether the knowledge we seek is academic or not, especially in regard to important social issues, good understanding can be augmented by respectful scholarly engagements with communities, especially those communities that are directly implicated in such social issues. In this regard some basic principles to inform thinking and action should be considered. What are these?

Firstly, one of the conditions for producing useful knowledge has to be that it is based on deep and systematic analysis and study. The idea that we need to study things deeply and systematically is not only applicable to academic knowledge. Especially when studying societies, superficial knowledge is almost useless and can actually be harmful. There are many good reasons why deep study is important in understanding societies, or communities within them. Superficial studies generally examine one or other aspect of a social or community issue. For example, in relation to the schooling system a great deal of attention is paid to the matriculation examination at the end of each year. There is considerable media coverage about the examinations and the results achieved. The general picture we get from the media is about the poor results achieved in a number of provinces, the low passes especially in mathematics and the sciences, the wonderful symbols obtained by a small number of high performing students, 'good' and 'bad' schools and such similar information. Academic researchers who follow these results dwell on the data and are called upon as experts to make judgments and pronouncements about the examinations, the education system, and governments' role in the schooling system and other such issues. Sometimes academics are even called upon to make comparisons between different schools, parts of the system or in 'comparative international studies'. Too often this is done without any real and systematic understanding of many of the complex factors that have to be taken into account. In effect, except for a few serious researchers, very little attention is paid to the deeper underlying reasons which could enable us to understand why students perform in the way they do in their *various learning contexts*.

To understand schooling (and other social) issues we have to understand not only the matriculation results themselves but a whole range of related social, economic, historical, and contextual issues. Ultimately, even issues relating to the personal circumstances of individual learners, their emotional and psychological states need understanding. Comparisons must be avoided unless we are absolutely clear about what is comparable and why. For instance, making comparisons between the matriculation results obtained in well resourced, stable, urban, middle and upper middle class schools where, in addition, the language of teaching and learning is the same as the language used at home, and schools in rural poor communities with no or little educational resources and where the language of teaching and learning and the home language are not the same, and that home is not 'print rich' as it might be in middle class homes, is simply untenable and seriously blighted. Similarly learning in a general environment provided by a social democratic political regime cannot easily be compared with that provided in a dictatorial political system – indeed these comparisons cannot be made with ease even across seemingly similar political systems

Good research and useful understanding requires much deeper analysis and the recognition of the complex issues which affect education. These include the socio-economic environment in which schooling takes place, the language of teaching and learning in relation to the language used in the homes of learners, the resources that exist in the home, the in-class strategies used by teachers, the resources available for learning, class-room sizes, the competencies and availability of good teachers and administrators, the stability of the school and even the habits, attitudes, culture and histories of the communities in which the research is located and other factors. And very importantly, the policy and political environment that frames the educational system as a whole at any particular period in the history of a society is critical. Without such deeper understanding only a superficial picture will be obtained. Such superficial understanding invariably gives rise to superficial 'solutions' which are not likely to have any beneficial effects and might actually worsen social problems. This means that good social knowledge can only be constructed by deeper and more thoughtful study in which a wide range of factors and fields of understanding are used.

Secondly, useful and systematic knowledge can be produced by engaging with and recognising the direct experience of individuals and their communities. There are many ways of ensuring that the knowledge that has been developed by communities over many generations can be understood and used. This knowledge can hugely enhance our understanding of the kinds of issues that affect communities. This has to be done carefully and thoughtfully so that the knowledge which communities have is properly understood, acknowledged and not abused. Above all, this requires careful attention to the modes and purposes of such engagement so that the underlying issues and assumptions implied in the scholarly engagement are made explicit and has mutual value. Too much of social science research violates the rights and dignity of the communities which have been researched. Too many communities have simply been used as *objects* for study without any consideration of the interests and perspectives, ideas and experiences of such communities.¹

¹For a discussion of this issue see Vally S, Motala E, and Ramadiro B, (2009) From "Abjectivity" to Subjectivity: Education Research and Resistance in South Africa, In Hill D and Rosskam E, (2009), *The Developing World and State Education*, Routledge, New York 179-196

Engaging meaningfully with communities can enhance our understanding of social phenomena and of society hugely. Communities are a valuable source of knowledge based on their direct experience, their attempts to solve the problems facing them and the struggles which they have faced over the years. Think of the communities that have endured and survived apartheid and it is obvious that they survived through finding ways to deal with its ravages and used their social, cultural and historical knowledge to do so. This knowledge will remain important for many communities given the continuity of the problems that have not been resolved even now.

That is how scholars who are socially engaged do their work – by being engaged with and in the issues that affect the communities they are a part of, by paying attention to the knowledge that such communities have developed over many years through their direct experience of the social issues. And even that is a complex process as we have argued elsewhere.²

Associated with the idea of local knowledges, there is now an increasing body of critical thinking and writing arguing that a great deal of academic knowledge produced even in 'post-colonial' institutions exclude other and particularly local or indigenous ways of knowing. Ignoring the knowledges of local communities (and whole 'nations' and continents) has been the experience of many peoples of the world resulting from the violence of colonialism and conquest. This violence has mostly been written and talked about in relation to its political, economic and social effects experienced through economic exploitation, poverty, the denial of political and social rights, etc. But what is not often referred to, is the tremendously negative impact of western colonialism on the knowledge systems, ideas, languages and traditions of communities and civilizations throughout the world and particularly in Latin America, Asia and Africa. The effect of this 'epistemic' violence, that is, on the systems of knowledge of local communities, has been written about (now) quite extensively by many writers like Dani Nabudere, Odora Hoppers, Shiv Visvanath, Howard Richards, V. Y. Mudimbe and many others.³

Also the argument or view that only people who are university trained can produce knowledge which is deep and thoughtful is highly contestable. Several justifiable criticisms can be made about this view. We think that it is very important to produce all kinds of knowledge and to be curious even though sometimes we might not know the immediate implications, meaning and effects of the knowledge we produce. Curiosity is very much a part of human life and it is strongly related to human imagination. Throughout human history many things have been learnt through the curiosity of ordinary people and these have inspired our best minds. Through it many great discoveries have been made and some of these have been accidental – i.e. without deliberately intending to make those discoveries.

In societies like ours where we have so many difficult social challenges to meet, so much to learn about what can be done about these social challenges and such urgency to solve these issues because of their effects on so many people, it is vitally important that we also rely on the curiosity, creativity, imagination and experience of communities to produce directly useful social knowledge. We cannot only be pre-occupied with our own 'curiosities' and regard them as superior to other knowledge. Minding our own 'curiosities' alone would mean that we remain uninterested in the many challenge which society places before us as academics and scholars. Can we really be indifferent to the condition of life of so many who are unable to exercise their basic human rights and can we be uncaring about the plight of so many in our societies who simply do not have the basic necessities of life? Regardless of whether we are called scholars or not we cannot. Indeed if we are true scholars *in and of* society we will not avoid these issues and use our scholarship to address them. We know that there are many sources of good and reliable knowledge and that these could produce very useful ideas. We know also that we should be skillful and serious if we are to produce such useful knowledge because such knowledge must be produced with thoroughness, with careful attention to detail, with creativity and concentration and through the help of others in a collective process. Often the best social knowledge is produced collectively and through collaboration since the world is a complex place and many heads are better than one.

Thirdly, all knowledge is related even though for some academics it does not appear to be so. And so even though some might be regarded as 'social and human' knowledge and others as 'natural' and physical', it is in reality *relational knowledge* since it relates to issues affecting human societies as part of the planetary ecological system. However the way in which we enquire into the issues that are defined in these different ways can differ quite considerably. The rules of research and scientific knowledge production cannot apply in the same way to nature and physical objects as to human beings and their communities. There are real differences, for instance, in understanding galaxies, the stars and planets, the chemical composition of these bodies, gravity, electromagnetism and atomic particles as compared with how you understand human beings and their societies. These differences speak not only to the specific methods of research and enquiry but also to the technologies – social and scientific – available for the purposes of such enquiry. For instance while telescopes are essential to the study of space they are not necessary for understanding human behavior. Unfortunately many researchers who are interested in human beings and their societies attempt to emulate the methods of research used in doing research in the *natural sciences*. Bernt Flyvberg rightly calls this 'physics envy' and explains how unproductive this approach is to the social sciences since we should understand that it is impossible to attain the direct causal relationships and certainty about social and human phenomena that the natural sciences (often aided by mathematics) seeks to achieve. And even there it is now accepted by many physicists that the kind of certainty which was aspired to earlier is simply not achievable as this passage below suggests

The claim of P.S Laplace at the beginning of our period - that anybody knowing the position and velocity of every particle in the universe would know the past and the future - becomes empty: nobody in principle could know these things.⁴

² Motala E, 2014 August, Public Scholarship, Democracy and scholarly engagement, Website EPC and emotala@lantic.net

³ Prof. Dani Wadada Nabudere 2005, Towards an Afrikology of Knowledge Production and African Regeneration, Email: mpai2005@yahoo.co.uk, Mbale, Uganda, Odora Hoppers, C.A. 2002. Indigenous Knowledge and the Integration of Knowledge Systems. In Indigenous Knowledge and the Integration of Knowledge Systems: Towards a Philosophy of Articulation, edited by C.A. Odora Hoppers. Cape Town: New Africa Books, Visvanathan S. 2014. A Moment of Forgiveness Asian Age. Delhi. 06th Mar 2014, Mudimbe V.Y. 1988. The Invention of Africa. Gnosis, Philosophy and the Order of Knowledge. James Currey. London, Richards H. 2004. On the Concept of Peacemaking. The Danish Peace Academy. November 2004. <http://www.fredsakademiet.dk/library/peacemaking.htm> retrieved 26th January 2006.

Steven Rose, world renowned Professor of Biology and Neurobiology at the Open University was a co-founder member of the Society for Social Responsibility in Science in the period when biological and chemical weapons were used in Indo-China. He has written extensively about bad science in the service of bad politics and especially that, "You can't solve unemployment with gene therapy or targeted drugs. The causes of misery are not predominantly biological." (Vally, 2012 of Bad Politics, Mail&Gauardian)

Generalisations which may be possible in the natural sciences – e.g. about the effects of gravity all over the universe cannot be made in *the social sciences* because societies are so different in the histories, contexts, traditions, social structure and other characteristics as compared to the characteristics of the cosmos. What is useful in examining natural phenomena is not automatically applicable to the study of analyzing social systems and issues.

Knowledge which is produced through controlled experiments done in laboratories is very useful for understanding some phenomena but the forms of experimentation useful in the natural and biological sciences cannot be applied in the same way in the study of societies. Moreover *scientific experimentation* is not the only means of acquiring knowledge used by scientists since we also use careful observation, make deductions based on these observations, and develop hypotheses and theories from them to produce useful explanations about phenomena. In fact, the use of mathematical techniques to identify specific causes has considerably increased the volume of *non-experimental empirical studies* (studies based on observation) conducted in recent times. That means that we should not be fixated on any particular method of study as different methods and techniques are more or less useful depending on the particular situation.

We need to understand many approaches to any idea or issue that is relevant to society. Careful attention therefore must be paid to the variety of ways of understanding scientific issues across the divide of scientific disciplines so that these different methods of enquiry to make them complementary and useful more widely. Too much of science is done without a clear understanding of both the differences and the potential complementarities of the various fields of knowledge and this has meant that usefully integrated understandings of science and society remains unattainable.

It is also true that particular fields of study only ask questions and examine issues from the perspective of those fields of study and leave out other perspectives and fields of knowledge and the direct experience of individuals and communities. Since all social issues relate to complex questions in society, knowledge of a particular field of study is never enough even if it is produced carefully and thoughtfully, and structured according to the rules and traditions of that field of study.

Academics, who insist on the pre-eminence of their own fields of study, without understanding how it is connected to other fields of *knowledge and to human experience*, can only produce partial knowledge. Although deeper study within any field is very important it is even more important to understand the connections between the various fields of study to understand human and social systems, their systems of thought as they evolve. It means that we have to transcend the limits of academic knowledge and its ways of theorising by also paying attention to the value of such human experience to augment theoretical knowledge. While theoretical knowledge is critically important it does not constitute all of knowledge. Moreover even theoretical knowledge is dependent on a variety of strategies which include careful experimentation, observation and even logical deduction which sometimes relies on mathematical approaches. More encompassing knowledge is therefore obtained by using a wider variety of sources of knowledge than what is required for theory building alone. A critical source of such wider knowledge lies in the experiences, traditions, activities, languages and histories of communities. In other words the knowledge developed by communities – sometimes over many generations is a key source of knowledge. Ignored, it impoverishes us all. Used properly it empowers society and researchers too.

Similarly the idea that only specialised academic knowledge is useful is also problematic. This may be useful in some cases such as the study of a particular drug and its application to particular medical conditions or in the study of the chemical properties of plant matter for medicinal usages. It is useful in studying animals in a laboratory to see how they react to certain stimuli or to a study of weather patterns over a period of time. Through using these very examples it is also possible to show the deep store of social knowledge obtained through direct experience, 'ordinary' observation and social learning over time. But it is not the same as the study of social issues which are made complex by the behavior of social beings acting on their own or as organized communities. For instance the study of educational issues in our society requires knowledge of our society, the history of education in it, the nature of our society, value systems and issues which affect learning in and out of the classroom. Having specialist knowledge in a particular field is useful but not enough. The idea of specialist knowledge also places strong limits on whose knowledge is regarded as important and excludes those who fall outside its boundaries, excluding some very important insights especially on social questions.

To be frank, there far too many university trained academics whose knowledge, even of their own subjects, is extremely limited, superficial and untested. There are some academics that have very little understanding of the relationship between their special areas of study and social and human issues more generally and who believe that that their discipline or area of study should be privileged relative to other areas of study. This false idea has a longer history than many academics realise. In the Middle Ages for instance, (the period up to the 15th century) four of the seven liberal arts subjects taught in medieval universities, were considered more important than others. These were arithmetic, geometry, music, and astronomy and were called the *quadrivium*. They were seen as more important than

⁴Rom Harré (ed.) 1986. *The Physical Sciences since Antiquity*, Croom Helm, London, page 113. For an explanation of the 'Uncertainty Principle see Feynman R P, (1998) *Six Easy Pieces*, Penguin Books, USA pages 136 et seq..

In the same way a raging debate about the relative importance of the natural and social sciences and humanities was started by the English physical chemist and novelist C. P. Snow in his 1959 lecture on these areas of study as the 'two cultures' which he saw as quite separate. His arguments were also interpreted to mean that the natural sciences were more 'scientific' than the knowledge produced by social scientists and in the humanities. Aspects of this debate were reproduced in the 1990s in what has come to be known as the 'Sokal' affair. Today similar debates continue amongst some academics. These are informed largely by the prejudices and self-interest of those academics that argue the primacy of their own fields of study and research and are problematic since all of human knowledge can have value if it is understood and used in particular ways.

Fourthly, some academics – more often in the natural and physical sciences think that science is a 'neutral' pursuit; that it is unrelated to historical development or moral questions; it is 'objective' in relation to social questions and cannot be assailed because of its 'abuse' by some scientists and political leaders. Moreover it is simply about gathering data using processes which have integrity and which are not ideologically slanted. This view is simply naïve. Academics and others who argue this view are disingenuous because they do not understand the nature of the social and political choices that inform their work and the sometimes catastrophic consequences of it. This recognition prompted Einstein to declare that the one great mistake in his life was to suggest to Roosevelt that the atomic bomb could be made. He had no idea about its devastating effects. Especially natural scientists – who regard their endeavors as value neutral and whether they know it or not – are deeply implicated in social choices because they pursue the forms of scientific endeavour (regardless of its content) which express the power of the dominant social and other relations. In addition, individual scientists even if they are not aware of it come to science with perspectives informed by their social settings, history, prejudices and the choices ingrained and developed in them throughout their lives.

Perhaps the best historical illustration of this is the development of the motor car in favour of more public forms of transport at the behest of the most powerful engines of economic growth and profitability in the US at the turn of the 20th century. We can see how this has affected the possibilities for cheap and available forms of public transport for all the citizens of a country. And so what is funded and what not illustrates more than anything else the important role of political choice in scientific work and the funding of scientists who continue to believe in scientific 'objectivity'.

Different kinds of knowledge are therefore connected even though some scientists don't make the connections. More than this, in fact, philosophers and griots in many societies understood the relationship between knowledge, culture, social systems and spirituality. This is better known as a characteristic of African knowledge and social systems as it is often assumed that 'Western Scientists' had little concern for these connections.

This is not entirely true because many of the great Western natural philosophers too - the philosophers who spoke about the purposes of science, including Descartes, Galileo, Kepler, Newton, Bronowski and Einstein, had no illusions about the role of science. They claimed social (or spiritual) purposes for it and pursued their work on that basis. The fragmenting of scientific endeavour and it's the attempts to remove it from socio-cultural and political life has obscured what was once the norm. There are debates about the relationship between science and morality and there are critics such as [Sean M. Carroll](#), who argue that morality cannot be part of science. They base their arguments on the distinction between 'values' and 'facts' and the idea that science does not resolve moral questions. Yet there is also the view that the separations between the values that underlie scientific enquiry (together with their assumptions) are inseparable from the factual 'discoveries' of science.

Finally, knowledge is cumulative; it is produced over many generations and continues to have use in human societies. It is cumulative because each generation builds on the knowledge of previous ones, each community relies on and builds the knowledge of other communities and that is how knowledge is developed all over the world. We are hugely interdependent in the way in which knowledge is produced. Just look at how over the last few decades the internet has spread worldwide. But the spread and sharing of knowledge is one of the oldest characteristics of humanity. Without it there would be no humanity as we know it. In particular if the societies that inhabited this continent for tens of thousands of years before human beings populated other parts of the world, had not 'transferred' and carried their knowledge to other continents and other parts of the world, the world would have been very different. If earlier human societies had not found ways of hunting, gathering, planting and ploughing, herding and increasing animal stocks thousands of years ago we would not have the civilizations we have today. If the ancient mariners had not understood how stars are related to the seasons and not observed the stars for sea travel over many millennia we would not have the advanced astronomy of today. If the Nubians of present day Sudan and Egypt had not built the pyramids we would most likely not have knowledge of the engineering and mathematics we now have. If the early craftsmen and women had not understood how to smelt iron and other minerals and potters not teach us how to create pottery, we would most likely not have the advanced manufacturing industries of today. And if families did not know how to use the wide range of herbs and grains they have used for thousands of years we certainly would not have all the fast-food outlets you see everywhere.

In fact the great body of human knowledge which we now have was developed and accumulated over tens of thousands of years by people in many parts of the world in many cultures, societies, languages and traditions. It was developed through a wide range of strategies. It has been both written and unwritten, book knowledge and oral/verbal knowledge. It is based on experience and intuition, deep thinking and practical application. Thinking and applying moreover come from the same source, the human brain and body and so are very closely related.

We know for instance that there is a close relationship between the practices of people and many discoveries made by scientists through the ages. We know that scientific discoveries would not be possible without practical knowledge and that both these forms of knowledge are inextricable from each other. The greatest scientific discoveries of the ages have all arisen from the practical day-to-day challenges that have faced human beings even though the individuals who first made these discoveries might not be aware of their implications. In fact even the toys made by people for their children have sometimes given rise to marvelous and unexpected discoveries. For instance the great Italian scientist Galileo Galilei used a toy-like spyglass (a toy telescope), pointed it at the moon and was surprised at what he could see. This gave impetus to his interest in astronomy and led to many great advances in or knowledge about the cosmos and space in the years that followed. Benjamin Franklin used a child's toy, a kite, to prove that lightning is really a stream of electrified air, known today as plasma. And the kite has also come to be used in understanding weather patterns better.

Human knowledge has been produced for many thousands of years before the existence of universities and academics. It is now accepted by some academics at least that publicly engaged science is now attaining increased recognition and has been produced by citizens for some time now as in the case of the People's Science Movement of Kerala in India which has seen successful partnerships between citizens and scientists in regard to important issues affecting rural communities in Kerala and elsewhere. Such citizen-based science or 'public science,' often based on participatory and action research, can actively combine academic science with local and contextual knowledge.

Academics need to take cognisance of the importance of the knowledge that can be learnt from the deepest historical cultures and experiences of 'ordinary' people. It remains important to relate to local forms of knowing to other forms of enquiry and to evaluate all of these together. Scientific theories cannot provide all the answers to the complex problems of societies and can sometimes appear to be dismissive of socially derived understanding and analysis. This means that all knowledge – however derived, must be examined critically. Human beings have also learnt from past experience about what knowledge is misleading and dangerous and there are also examples of 'scientific' knowledge which has proved to be socially destructive and dangerous. We know of a number of instances where widely acknowledged scientists have been responsible for unconscionable actions; for defending ideas which have had negative social and planetary consequences and for misleading societies. For all these reasons, we should judge all knowledge, social or scientific, critically and examine it through diligent and systematic study.

Enver Motala - NMI

The role of students and academics in community struggles

Aziz Choudry

What role could those studying or working in higher education play in relation to the daily struggles of the communities around them? Visiting the Centre for Integrated Post-School Education and Training (CIPSET) at the Missionvale Campus of the Nelson Mandela Metropolitan University (NMMU), this and other questions have sparked lively conversations with colleagues inside and outside of the university, including community activists, educators and researchers. I am impressed by CIPSET's deep, grounded work with rethinking how a university can be relevant to, engage with and serve communities. This thinking and action comes from an understanding of the importance of the learning and knowledge which is often generated outside of university classrooms - in communities, activist and social movement spaces. As a university professor in an education faculty, my work on knowledge production, research and informal learning and non-formal learning in community organisations, unions and social movements first connected me to CIPSET. The academy certainly does not have a monopoly on the production of knowledge: theoretical and experiential forms of knowledge can enrich each other. Can these be combined, and applied to concrete experiences in struggles to help reorganize understandings in ways that are driven and shaped by community priorities? Can we rethink universities so that scholarship is socially-engaged and relevant to the present and future lives of people in communities who have been historically denied access to higher education? How can universities overcome the disconnect - real or perceived - with the rest of society? To concretely address these questions universities must continue to relationships of trust and dialogue with communities and movements, as well as commit to deeper visions of social justice.

'The community' has too often been treated as a 'field' where data is collected in an extractive fashion, and taken back to be analysed by 'the experts' who may never be seen again, to serve interests other than those defined by community members. Yet there are other traditions of scholarship. When I became a university professor, I consciously followed in the footsteps of scholars with whom I had worked in movements and community organizing and who have continued to do so unapologetically. I strongly identify with Canadian scholar- activist Sunera Thobani's statement:

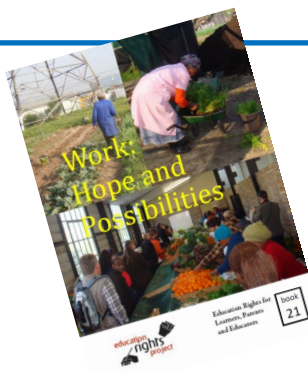
I place my work within the tradition of radical, politically engaged scholarship. I have always rejected the politics of academic elitism which insist that academics should remain above the fray of political activism and use only disembodied, objectified language and a 'properly' dispassionate professorial demeanor to establish our intellectual credentials. My work is grounded in the politics, practices and languages of the various communities I come from, and the social justice movements to which I am committed.

There are many possibilities for people in universities to work with communities and movements in ways which go beyond extractive, exploitative relationships, or feelgood acts of charity. This could mean supporting education and organising work that is already happening on the ground. Popular education has long been linked to the idea of building collective spaces and movements in which ordinary people can see themselves as knowledge producers and agents of change. In the social sciences and humanities there is important and exciting work to develop contextual understanding and historical knowledge to help address community and societal challenges and build analyses of power; to work on popular education practices and experiences, document, reflect upon and evaluate informal and non-formal learning; to bring people's experiences and practice knowledge into dialogue with different kinds of 'theory'. Equally, scientists can, for example, support community and labour environmental monitoring, education and mobilization work against pollution and other environmental and health problems.

There are many pressures on education today--particularly the focus on "standards" and "outcomes," in an increasingly commodified sector. In universities, building and maintaining relationships with communities, movements, organizations and activist groups often goes unrewarded and unrecognized in terms of pressures to publish peer-reviewed scientific journal articles, to get research funding and other ways in which academics are usually evaluated. But universities are not monolithic and remain contested spaces. It is important that the histories of the roles played by those in universities in movements for social change are not forgotten--not least from black and working-class struggles for the rights to education and the transformation of society during ---and since - the apartheid era.

Indeed, documenting histories is crucial for the educative and knowledge production work in today's communities and movements as a resource to inform present and future actions. How might engaging with histories of communities and people's struggles in Port Elizabeth/Eastern Cape be connected to an agenda of education for social change? Those of us based in universities might deploy academic resources to support the documentation of struggles, movements and perspectives that are unrecorded, misrepresented or otherwise rendered invisible or inaccessible. In *Freedom Dreams*, historian Robin Kelley recalls speaking with US students who view the 'real' world "as some concrete wilderness overrun with violence and despair, and the university as if it were some sanctuary distant from actual people's lives and struggles." Kelley challenges the idea that 'dropping knowledge' on 'the people' from universities will somehow generate social change and new liberatory social movements. Like Kelley, I believe that community organizing and movements arising from ordinary people's problems and frustrations generate new knowledge, theories and questions. They can also offer hope and vision for a new, fairer world. I look forward to hearing how CIPSET and NMMU continue to listen to, and engage with, these questions.

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Review of Work: Hope and Possibilities Booklet

Enver Motala

CERT and the NMI recently published an important little booklet titled *Work: Hope and Possibilities*. The booklet is available from CERT and electronically at <http://erpbooklets.wix.com/edu4all>. The booklet was written compiled by Britt Baatjes of the NMI as part of the CERT ERP Series edited by Salim Vally.

The origins of the book lie in the idea that the prevailing global social and economic system is simply incapable of producing meaningful lives or livelihoods for the majority of the global population, millions of whom are now increasingly marginalised, dispossessed and oppressed by the dominance and reach of global corporate power and its accompanying justificatory ideology. This ideology, often buttressed by the power of the state is not only a serious barrier to global social and economic justice but threatens to destroy the very planetary ecology on which all life is based. It is a pernicious, greed driven, individualist and morally reprehensible system that cannot be sustained if humanity is to survive. How can a world in which (according to so many reports) so few own, control, accumulate and consume so much while the great majority of humanity struggles to survive, be right? How can so many people go to bed hungry while others have untold billions of dollars to satisfy their every material needs. Is it really possible that a few hundred or even a thousand individuals are together worth more than half the world's present population of around 7 billion human beings?

Criticism of the present system is simply not enough since what is required to get humanity out of the morass of the present is the need to find alternative possibilities for social organisation and life – a new way of thinking leading to new ways of doing and a society that is fundamentally different from the present unequal and wholly indefensible social system.

The booklet provides a brief but very important insight into a different world – one that has the potential to be based on fairness, respect for humanity and justice for individuals and communities and the recognition of the knowledge of the communities that have been socially ignored and deliberately marginalised. And most importantly it sets out the possibility for finding new ways of working through socially useful work based on collective community effort and sharing.

In particular it shows how because of the terrible reality of poverty faced by so many people under the present system, new ways of doing things are beginning to take shape. Yet many of these alternative ways of doing things and producing livelihoods are not entirely new. They simply appear to be new because they are so much 'against the stream' – as examples of what can be done despite the power and ideology of greed and consumerism and social privilege for the few.

Perhaps the most important idea that is contained in the book is about work under capitalism. For those who are unemployed and especially for those who have been seeking work for so long, it must be quite clear that the possibilities of getting one are more and more remote. That is why so many have given up even trying to get a job and have to survive in whatever way is possible. And this is so regardless of the skills so many unemployed people have. While there are always in every society some new skills that are in short supply, that can hardly be true when millions of people in any one country- even the most developed capitalist countries - have no job, no hope or prospect of a job in some cases for a lifetime.

There are indeed ways of doing work which satisfies individual and social needs at the same time. There are possibilities and examples of socially useful work – that satisfies individual wants and social needs too. And this means rethinking the economic system as an alternative to the privatised, individualistic, greed and consumer-driven 'dog-eat-dog' system that now dominates all life on the planet. It means thinking about an economy that is based on 'solidarity' in which the value of sharing and social solidarity is dominant, where co-ownership, self-management, cooperation and participatory decision making are key.

The possibilities that the booklet examines are many and we will pick on only a few here. It's necessary to read the booklet itself.

For instance, there are Cooperatives all over the world and millions of people are involved in them. Cooperatives are about a group of people who get together voluntarily to do something together. And they do this for their mutual benefit whether these benefits are social, economic or cultural or any other. But the organising idea behind cooperatives throughout history has always been about 'cooperating' to work together to develop livelihoods – ways of producing and sharing the things that are needed by families and communities based on democratic decisions.

About 800 million people are involved in these forms of getting together for their mutual benefit and this figure actually represents more people than have work in the biggest multinational corporations in the world put-together. Most historians refer to the Rochdale Society of Equitable Pioneers as the first modern cooperative. It was a 'consumer-owned' cooperative and sold food to its own members and it was formed by many people who were skilled yet jobless – that is, as a result of the failure of British capitalism at the time. One needs to be careful to distinguish between co-operatives that have the object of setting prices higher and controlling the market for a group of producers and cooperatives that are genuine efforts at supporting poor and marginalized communities.

But in many ways the idea of cooperative production is very old – possibly as old as humanity itself since for tens of thousands of years before the arrival of the feudalism, slavery and capitalism, people have acted collectively to farm the land which has for most of history belonged to communities as a whole – even if it was ‘managed’ and controlled by ‘elders’ or Chiefs and other leaders.

Cooperatives are therefore bound by a set of underlying social values based firmly on the principles of social justice and sharing. What are some of these?

- Membership is entirely voluntary and is open to all who subscribe to its underlying values
- They are controlled by the members democratically
- Cooperatives are independent organisations which stand on their own and are not affiliated to any political organisation
- They are based on mutual self-help and co-operation amongst its members and with other cooperatives to form networks amongst them

The booklet tells us about a number of examples of cooperatives in the world. The include:

- The Oromia Coffee Farmers Cooperative Union in Ethiopia. It is an agricultural cooperative with over 100000 members, producing, processing and selling coffee and the Union has 115 cooperatives affiliated to it and now has its own bank which provides financial help to its members together with insurance cover too.
- The Heiveld Rooibos Cooperative in the Karoo in South Africa guarantees that 30% of its profits is ploughed back into community development projects to support other economic development in the area. An interesting thing about this cooperative is that it is also advancing the ideas of an alternative food system concerned with both health and the environment. It is a part of an emerging global network that is concerned with these issues and is an alternative to the consumerist and capital intensive forms of production dominant globally. Having a ready market for its products is quite crucial to this type of cooperative.
- The Vio.Me. factory in Greece is another interesting example. It grew out of the worker-led occupation of the Vio.Me. factory where workers had gone on strike and re-opened the factory closed by their employers, under their own control and management. Its profits are used to support needy unemployed people.
- The Longo Mai Cooperative in France is a network of agricultural cooperatives formed in 1973 which has spread to other parts of Europe and to the Central America too. Its main value – other than the idea of doing things cooperatively, is its commitment to pacifism, anti-capitalism and social equality and its activities focus on ‘community life, craft and agricultural production, the joint management of energy and water and the respect for the environment’. Interestingly the cooperative also publishes books and has other media outlets.
- The Uralungal Labour Contract Cooperative in Kerala India is another example of a cooperative – although it is not dealt with in the booklet itself. It has been around for over 85 years and has 2000 members and is based on democratic practices, for community based large infrastructural projects – like roads, bridges and building complexes. Very importantly it is committed to include people marginalized because of their status as ‘lower castes’ in India, and of women in particular. It is also concerned about the environment.

The booklet deals with other interesting and important ideas about community based – economic systems, stokvels – which have a long history in South Africa. Amazingly some 11.5 million people are involved in Stokvels – saving schemes to provide financial and other help to its members. As the actress Manana Ranaka is quoted to say – ‘Stokvels provide platforms for people to connect build friendships and support each other through difficult times’. Also women form the backbone of many of these alternative forms of work and social life since it is often women who have to bear the brunt of the impact of poverty on their families and themselves.

In the booklet there is also an important discussion about ‘food sovereignty’ – the idea that those who produce, distribute and consume food should be at the centre of making decisions about food whether these relate to the systems of food production and distribution or about the policies and regulations about it. At the moment it is plain to see that these decisions are dominated by the interests of global corporate organizations and their markets and even governments have little power to regulate these.

All these examples and the practices they exemplify are the building blocks of a ‘solidarity economy’. Although the booklet does not deal with the idea of a ‘solidarity economy’ in any detail, it points to such an economy. A solidarity economy is based on several important principles which in many ways are a reaction to the unaccountable power and practices that have shaped the world under capitalism. The key ideas about a solidarity economy can be summarised as follows:

- It is based on a vision of solidarity among individual members, enterprises set up by them and between these enterprises
- It aims at solidarity with communities from which the members come
- The collective ownership of the assets and resources are intended to benefit everyone in enterprise and the community
- It is based on self-management which means members (men and women together) have the power to make decision, and develop accountability through democratic participation
- The control of capital and assets is based on building from below and through democratic control over its uses and lending
- A solidarity economy is intended to be eco-centric and non destructive of environment in the use of inputs for production, distribution and consumption patterns

- Networks of solidarity are key to its development and hence it concentrates on the widening its networks.
- The solidarity economy seeks to change the role of the state from that of 'regulating capitalist market relations' to one of promoting alternative relations of savings and credit, production, distribution and consumption. In this the state has a vital role to play in creating the conditions for an alternative economy based on social solidarity.

The building blocks of a solidarity economy are being laid in practice and by experiment – pushing the boundaries of the possible especially to set up an alternative system that overcomes the limits of capitalism and capitalist relations. It is unlike a 'social economy' which is intended mainly to ameliorate the impact of capitalism on the poor by activities which include charity and are based on 'social responsibility'.

The solidarity economy is not intended to ameliorate the worst effects of capitalism – it seeks to transcend it. It is ultimately not only about an economic system since it is more fundamentally about changing the oppressive social relations that are at the heart of the capitalist system. In effect the booklet raises questions about what kind of social and economic system would best meet the needs of humanity and not just the values and purposes determined by those who are privileged as part of the global corporate and political elites in all societies. Its central lesson is that despite all the power held by such economic and political elites, there is an alternative to the present uncaring global system based on private accumulation, greed, injustice, and a disregard for human rights and justice.

Enver Motala NMI

Book Review of 'They Can't Represent Us'

Understanding education's role in society requires much more than an analysis of education policies, its institutions, systems and history, unrelated to the wider socio-political, economic, cultural and technological context. This is because so many of the factors which are regarded as 'exogenous' to education have a profound impact on it. In rural schooling for instance, the ability of young learners to get to school on a day-to-day basis often depends on environmental factors like the weather, the water level in rivers, the condition of roads, responsibilities over home keeping and cattle herding, traditional practices and the like. And as we learnt from a study of rural schooling conducted by the NMF in 2004, schooling was also intimately connected with nutrition as so many learners simply did not have enough sustenance to endure the rigours of proper learning. In effect a number of conditions impede or support the conditions for schooling in countries like South Africa since education can be intrinsic to the idea and possibilities for the development of society.

Amongst the critical issues relating to the availability, cost, quality and values inscribed in educational systems globally is the quality of the democratic system in which such systems exist. Education in relatively stable political systems, which enhances the public good through education and is committed to democratic and accountable political processes, is likely to provide considerably better education than systems that do not. Especially important in this regard are questions about public accountability, openness and the participation of the public – and especially for the communities that are most socially marginalized in the policy preferences, choices and priorities of the education system.

Representatives who bear in mind their public mandates are best able to carry these out while those who rely much more on 'experts' so-called, consultants and advisors to a greater or lesser extent are likely to develop much lower standards of public accountability.

Amongst the most important factors in the development of healthcare, education, sanitation, ecological and other systems is the content, quality and attributes of democratic government in any society. A recent book entitled '**They Can't Represent Us**' by Marina Sitrin and Dario Azzellini (2014 VERSO) takes up the issue of representation in the most robust and candid way possible. Its concerns arise – as the Foreword written by David Harvey suggests, from the global rise of radical movements 'on the street, in the squares' challenging the extraordinary power and hegemony imposed on the global poor in the interests of those who have 'got the money and can buy politics, media and, really anything they want'. And this challenge is a direct consequence of the global economic crisis that has plagued even the developed capitalist economies of the world and has left millions, homeless, jobless and penniless. It is a consequence of the reality that while possibly a billion people are unable to assure a daily meal there are, according to Forbes magazine, 1645 billionaires in 2014 with a collective net worth of \$6.4 trillion. And by some estimates this gargantuan wealth is equal to that of one half of the world population. In other words 1645 individuals are worth the same as 3,500, 000 000 people and in effect 1 person has the equivalent of the wealth of over 2 million people. Imagine that!

The background to this book is both the crisis of global corporate capitalism and the corporate takeover of 'democratic' political systems – especially in the global north and its effects on the world. Its import is captured by what Hilary Wainwright says in relation to the social movements now arising everywhere to challenge the hegemony of corporate forms of governance, thus:

As this exhaustion of existing representative forms of democracy has become more and more visible, more hollowed out both by the pressures of the market and the opaque nature of international governance, people working for social change have increasingly abandoned strategies reliant on organizing through political parties, demanding simply that governments act on their behalf. Instead they are applying human creativity to daily forms of self-government, collaborating to find solutions to urgent social and environmental needs, or at least to illustrate a direction for the democratization of democracy. They are also taking direct action to influence public opinion through symbolic action around a clear and strategic message, thus seeking to influence the mainstream political agenda from beyond, rather than through, the party-political system.

The crisis of 2009 exacerbated the inequality that existed before that - meaning that global poverty, inequality, and unequal power have worsened through the crisis of capitalism. And this accumulation of wealth is a direct consequences of the dispossession of those who have been driven off the land, forced out of jobs, forced into insecure forms of labour and its effects on education, healthcare and the basic necessities of life for so many. Yet all the while the power of global corporate organisations and the inequality they engender has grown unabated, and their power completely obscures the possibilities for choices that are based on the proper representation of the broader citizenry through the effective use of democratic participation. The rise of new global solidarity movements is a direct response to this crisis and only that can stop the rampant global system that is dominant today.

The book is a clarion call – Ya Basta! – enough is enough. It seeks to bring to the attention of those who seek a new global order based on the principles of social justice and equality and the need to stop the rot engendered by global greed and through profit making. The immediate impulse for the rise of these alternative movements for social justice can be found in the collapse of Lehmann Brothers in the US,

giving rise to a global financial and economic crisis. This collapse was the result of the profit making schemes hatched by bankers and financiers. It resulted in millions of people - including in the middle classes – being forced into homelessness and losing access to basic amenities, including health care and nutrition and of course jobs. Millions of young people in particular have no hope of securing decent livelihoods.

The emergence of these new social movements is in many senses a break with the past – especially in the forms of its organization based on a much more encompassing concept of direct and continuous democracy. The book discusses several concepts that have emerged - or been extended, from past histories – to capture the underlying approaches symbolized by these movements -The concepts include *horizontalidad*, *rupture*, *popular power*, *social protagonism*, *recuperate*, *todos somos*, *autonomy* and others. The discussion of these concepts is exemplified by reference to events in many countries in their differing regional contexts whether in Brazil, Spain, Greece, Russia, Argentina the US, UK or elsewhere.

As the blurb on the back cover says, the book 'is an expansive portrait of the assemblies, direct democracy forums, and organisational forms championed by the new movements as well as an analytical history of direct and participatory democracy from ancient Athens to Zuccotti Park.

Book Review of Robin Dunbar's 'The Trouble with Science'

There are many writings about science dealing not only with its various branches and what they study but also with its history, philosophy, sociology, anthropology, political economy and other attributes. Dunbar Robin's book titled '*The Trouble with Science*' is a useful book to get to grips with some aspects of science. It enables us to understand a few central ideas about what science and scientific knowledge is about and how it is achieved.

Science is an activity in which human beings are involved. It is the product of human civilization and culture and very much a part of the technological capabilities that societies have achieved over tens of thousands of years. According to Louis Liebenberg, one of the foundational pillars of scientific thinking - *hypothetico-deductive thinking* - has been around for about a hundred thousand years. In his book titled *The Origin of Science* (2013) Liebenberg provides a detailed examination on the life of hunter-gatherers of Southern Africa. He shows how the essential attributes of hypothetico-deductive thinking was developed by them and how the ability they had then is no different in principle from the reasoning applied by Albert Einstein in the development of his special theory of *Relativity*. He implies that the mode of reasoning required by Einstein and the San (and their contemporaries in Southern Africa) was not fundamentally different. The ability to think scientifically – even if it was not called that, has been around for a long time.

Science is about a number of activities and not just about facts, hypotheses, experiments, logical reasoning, or theories and laws alone. Each of these has a place in scientific thinking. For instance, facts are critically important to science and cannot simply be substituted by theories since theories are reliant on factual information in the first place. The development of theory is not enough although theories are developed to explain physical and social phenomena. Science is also not only about experiment although experimentation is a very important part of it. And yet the 'scientific method' so-called has sometimes been confused to mean simply the 'experimental method'. Science is also about careful observation so that one can affirm the validity of one's observations, experiments, explanations and theories. Observation is of course necessary to examine one's hypotheses and not just as starting points for speculation. But observation is not enough. There is as Dunbar says a need also for the "use of rigorous logical deduction to develop causal hypotheses that could be tested with empirical evidence." Science requires reasoned and logical thinking or deduction, that is, the ability to make deductive judgments about what one sees, records and reflects on and builds knowledge.

In addition, especially in the physical sciences it is often useful to apply statistical analysis and mathematical techniques where non-experimental empirical studies are necessary – since experimentation alone is not enough. But mathematical reasoning is not all, though it can for certain purposes play an extremely useful and instructive role – especially to subject phenomena in the physical sciences to logical, deductive reasoning.

It is better therefore to understand the methods of science to be a combination of observation and the collection of empirical evidence, the formation of hypotheses and their examination, making rigorous logical deductions from what is observed and experimented upon; the development of explanations and theories based on such deductions and the need to continuously re-examine the hypotheses and theories by further observation, experiment and analysis. Thus scientific ideas are generated by a number of human activities since it is in their combination that the best understanding is achieved.

Good science requires that for certain contexts, particular approaches in the overall methods of science can be used more advantageously than others. For instance in physical research, as we have said, mathematics has had great value and is sometimes inseparable from it, yet its value in understanding some social phenomena and human attributes is less obvious or useful even though good quantitative data may be very useful for some social explanations especially if the limits of such data are acknowledged and the analysis of the data is rigorous. One of the problems that characterizes some social science research is what Bent Flyvberg has called 'physics envy' – the habit of social scientists trying to emulate the 'exactness' and 'certainty' that typifies the methods used in physical research. Unlike in the physical sciences, in the human and social sciences, concepts have no fixed meaning. In the physical sciences for instance the concept of *energy* can be defined with great precision, whereas nearly every concept in the social sciences is given to complex uses, definitions and even contested and contradictory uses. It is important therefore to know that the approaches to scientific enquiry must speak to the context of their application.

In essence therefore science is a way of finding out about the world. It has been in use by human beings for millennia for providing useful explanations about it. It is not simply a body of theory. It is as Dunbar says 'knowing that' and 'knowing why'.

Although some historians of science regard scientific enquiry as a methodological prescription unique to modern Western culture, that is not at all true, as Liebenberg and Dunbar show. Dunbar goes so far as to argue that 'the methods of empirical science are in fact genuine universals characteristic of all higher forms of life.' I do not digress here into the complexities of the debates about 'pre-scientific' and 'scientifically advanced' cultures or the idea that even modern science is no more than another form of culturally constructed belief system - like pre-scientific cultures. Dunbar and many other authors have provided ample evidence that genuine science is possible independently of the intellectual traditions of the Western world such as through the remarkable achievements of the Chinese in the 1st millennium BC, the achievements based on African epistemologies and scientific culture and its profound impact on Greek science, the critical role played by Indian and Arabic science on the European 'enlightenment' especially through its influences on modern mathematics, physics, chemistry, medicine, engineering and astronomy. And Dunbar provides an intriguing and informative set of examples of the science (based on sound empirical evidence) used by Fulani of West Africa, the Boran of East Africa, the Mende of Sierra Leone, the Masaai of East Africa, the Pokot and Turkana pastoralists of Northern Kenya, Wodaabe of Niger, the Fulani, Shona, Bambara systems of soil classification and the formidable powers of navigation of Micronesian islanders who, based on their scientific observations, were able to sail 'compass-perfect' journeys of 4500 miles across the Oceans without a compass.

In fact several studies on 'traditional' societies have shown how good their knowledge of the natural world must be and how, for instance, remarkably similar the criteria and principles for natural classification are across human cultures despite time and other differences. As Dunbar argues science is no more than a way of finding out through empirical observation and causal inference. Human beings have engaged in it for many thousands of years without calling it by 'science'. In fact the word 'scientist' was only first used in the West by William Whewell in the 1830's and so the view that 'traditional cultures' had no scientific understanding is simply absurd.

Enver Motala - NMI

Launching Education, Economy and Society

Enver Motala

UNISA Press recently published the book titled *Education, Economy and Society*, which was advertised in the first Issue of this Review. It was compiled and edited by Salim Vally and Enver Motala of CERT and the NMI respectively. The book has 13 chapters and a preface that was written by Professor Steven J Klees of the University of Maryland in the USA.

Most of the contributors to the book are work within the Education Policy Consortium or are active collaborators with EPC researchers over the years. With one exception the researchers are all resident in South Africa and some have had a long period of experience working on education and training issues relevant not only to South Africa but more widely. Most importantly some young researchers were drawn into the writing of the book and made important contributions to it. Without doubt the process of compiling their articles provided valuable experience in the rigours of producing academically acceptable contributions. This they had to do through the various iterations and drafts that had to be produced before the book was finalised and submitted to UNISA Press which, in turn, had the book sent to peer-reviewers through a double blind process before its acceptance and publication.

After its publication the editors were particularly keen to engage as many academics and community-based researchers and activists in the discussion of the main tenets of the book. To facilitate this, and after its publication, the book was sent to a number of other 'reviewers' with a view to soliciting their critical comments on the book as part of the process of launching it and the dialogue and debate that followed. Quite remarkably no less than eighteen responses were received – some from the most established and well known scholars and social activists in the field. Many of these are engaged both in education and a wider range of critical thinking about social justice research and practice. Their comments were both illuminative about the relevance of the issues that were canvassed in the book and were instructive about the issues which were considered important in the debates concerning education's role in society.

Many of the commentators expressed the view that the book laid the basis for a broader debate about that role – especially through its critique of the reductive role education is often ascribed in the 'scarce skills' mantra dominating ideas about education's role. It is in recognition of that several commentators regarded the book as 'compelling reading' for academics, students and policy makers and suggested that it be made a 'compulsory core curriculum regardless of their disciplinary specialization' for university students. It was recognised that the book contributed to a discussion about 'where the country should go,' bringing with it a 'a breath of fresh air' and a 'bracing balance' to the debates about education and society – as also a 'must read for activists, educators, students and academics in the Global North and South' interested in issues of 'social justice as the antidote to global neo-liberalism'

Vice Chancellor Swartz, expressed the view that it contained

A refreshingly different set of voices critical of the drone-like assertions of 'human capital' theories on the alignment of state policy, education and skills training regimes to market demands in tackling the much vaunted triple challenges of job creation, poverty reduction and inequality in post-apartheid South Africa.

The book required readers 'to think more creatively' about education beyond its value as an instrument of the labour market asserting its role in the development of social, political and cultural goals. It was praised for 'debunking' the dominant global view about the supply of education as a panacea to economic failure based on a skills discourse that was unsophisticated. Some saw it as a call to action – beyond interpreting the world, while others remarked on its reach beyond the 'reductive ways of thinking about education and development'.

Clearly these commentators think that the book has an important place in the lexicon of writing about education and society, going beyond the decaying premises of the prevailing discourses. In fact it offers a challenge to the purveyors of those discourses to respond to the arguments of the book so that more debate and discussion around the issues canvassed by it can be had.

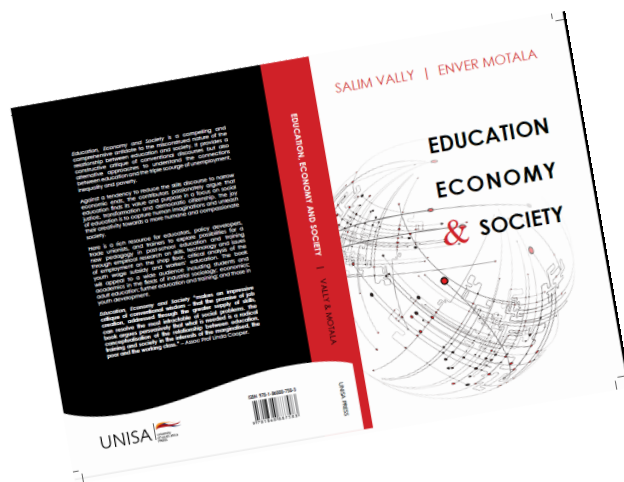
In addition to soliciting these reviews a number of book launches were organized to provide members of the public, academics, policy-makers and others an opportunity to share the ideas set out in the book and to engage with them critically. These launches took place in various cities around South Africa including Johannesburg, Port Elizabeth, Cape Town, Bloemfontein and Durban. The launches were organised by associates of the EPC in the various cities and were well attended. In two cases the launches were part of and coincided with pre-organized Conferences – in one case of the South African Sociological Association and in another of the South African Education Research Association. In both cases authors were asked to make presentations to a plenary discussion about the themes of the book. In addition various radio and television interviews with Salim Vally were held in reviewing the book – both locally and abroad. In every case there was vigorous discussion and an exchange of ideas and a great deal of interest in the ideas contained in the book. In fact the book encountered a great deal of positive comment and affirmation and little, if any, criticism. It appears to have struck an analytical chord in the minds of those who took the opportunity to engage with it.

Trevor Ngwane claimed that,

The book's authors collectively marshal evidence and use critical analysis to expose the role of capital as a historical shaper of the character of the South African state and critique the government's negative education policies. The current dominant discourse that subordinates education and training to economic growth is systematically problematized and challenged

Professor Steven Klees of the University of Maryland was the Keynote speaker at many of the launches and his address concentrated on the key themes of the book and its critique of the prevailing discourses about the relationship between education and the economy, drawing the conclusion that

Vally and Motala's book offers the voices of struggle and experience to understanding issues of education and development in South Africa and, by extension, to many other parts of the world. It is a path-breaking book that pushes the envelope to a more complex and critical understanding of some of the most important issues our societies face. I recommend it to you highly and I thank you for your attention.



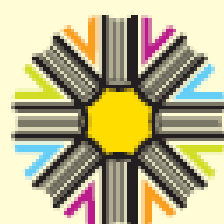
The book launches and the discussions that took place through them across the country elicited many responses. In the main these focused on understanding the education and training system more fundamentally than through the feeble and perfunctory outpourings found in the public media. It was also clear that the subject matter of the book has not been sufficiently aired in either academic or public discourses, nor has the 'refreshing antidote' it provided in the quest for a deeper critical analysis of the issues investigated by it, been canvassed exhaustively. What is obvious is that a great deal more scholarship needs to be devoted to this area of critical analysis and much more and wide ranging public debate, dialogue and reflection is necessary on that



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