

Beyond the Obsession with Skills and Towards a Discourse of Knowledge, Skills and Attitudes

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Introduction

In Lewis Carroll's *Through the Looking Glass*, Humpty Dumpty says "When I use a word, it means just what I choose it to mean, neither more nor less." "The question is," says Alice, "whether you *can* make words mean so many different things." "The question is," says Humpty Dumpty, "which is to be master - that's all." This is a useful point at which to enter discussion on 'skills' and South Africa's 'skills shortage'.

Type the word 'skill' and open the Microsoft thesaurus and you will find 'skill' defined as: 'ability, talent, cleverness, dexterity, expertise, proficiency, skillfulness, handiness, knack, aptitude, competence and flair'. This well raises the problem – the term 'skills' is accorded such a variety of meanings. Similarly, while there is much reference in South Africa to 'skills' and 'skills shortage', it is not always entirely clear what precisely this terms refers to.

Discourses on 'skills'

At least three discourses on 'skills' can be identified.

One discourse is where 'skills' is a reference to entirely specific technical capabilities. Here, there is a bemoaning of the dearth of competent people with specific technical capabilities in certain areas of the economy and at certain levels of the occupational structure – electricians, plumbers, welders, brick-layers, plasterers, tilers, machinists, mechanics, tool-makers and the like. Accordingly, priority is accorded to the development of people with specific technical capabilities for particular levels of the occupational structure and for specific areas of the economy – both in terms of the quantity of people and with respect to the quality of their technical capabilities.

Another discourse around 'skills' extends the concern around the shortage of artisan 'skills' to the dearth of competent people with the technical capabilities also required to undertake various *professions* – in construction, engineers, architects, quantity surveyors, project managers; in health, surgeons, general practitioners, therapists and nurses, in financial services, accountants, actuaries and economists, and so on.

Both of the above discourses are similar in that they are preoccupied with technical capabilities. The only difference between them is the levels of the occupational structure that they emphasize.

In a third discourse, 'skills' and the skills shortage is used as a short-hand to refer to not only the need to develop technical capabilities but *also* the need to more generally develop the knowledge, expertise and attitudes that are needed by people to participate in and enhance economic and social development.

Here, in as much as it is recognized that the lack of competent people with the requisite technical capabilities is a brake on economic and social development, it is not taken as self-evident that developing 'skills' or technical capabilities alone is a *sufficient* condition to address our socio-economic challenges and enhance economic and social development.

In contrast with those who punt skills development as a solution to our economic and social challenges, in this discourse there is an understanding:

- That skills, especially reduced to specific technical capabilities, is not the only issue
- That distinct from skills and technical capabilities, also in question and vitally important are *knowledge*, *expertise* and *attitudes*, and
- That the education, training and development of people must therefore be approached from the perspective of the overall and particular *configurations* of knowledge, skills and attitudes and expertise that are needed by our economy and society.

There is also

- An appreciation of the difference between skills and knowledge, expertise and attitudes
- A recognition that there is a difference between training and education and that it is not helpful to either obfuscate or obliterate the difference between training and education, and
- An understanding that economic and social development entails considerably more than simply the technical skilling of people.

To return to Humpty Dumpty and Alice: “The question”, as Alice says, is “whether you *can* make words mean so many different things”. I suggest that it is not helpful to use the term ‘skills’ in so many different ways – it neither clarifies the concept ‘skills’ nor distinguishes between skills and other qualities such as knowledge, expertise and attitudes that are equally important constituents of competent people (and especially citizens in a democracy).

Knowledge, skills and attitudes

Let us proceed by agreeing that for economic and social development we require competent people; and that, moreover, such competent people need to possess different kinds of competences – ‘cognitive’ competence (knowledge), ‘functional’ competence (skills) and “personal and social-attitudinal competence” (Winterton et al, 2006:1).

The well-known ‘Bloom’s taxonomy’ is similarly “based on three domains of educational activities: cognitive, affective and psychomotor....The cognitive domain relates to mental skills (*knowledge*), the affective domain for growth in feelings or emotional areas (*attitudes*), while the psychomotor domain is concerned with manual or physical skills (*skills*) (ibid., 2006:7-8, emphasis added).

To begin with *knowledge*, or cognitive competence, this encompasses the acquisition and recollection of information and data, the interpretation of data, understanding of meaning, theorization, application of concepts, analysis, synthesis, evaluation, and the like.

According to Winterton et al, knowledge “is... the result of an interaction between intelligence (capacity to learn) and situation (opportunity to learn). Knowledge includes theory and concepts, as well as tacit knowledge gained as a result of the experience of performing certain tasks” (2006:7). It is suggested that “two types of learning” are involved:

“‘single-loop’ learning about obtaining knowledge to solve specific problems based on existing premises; and ‘double-loop’ learning about establishing new premises such as mental models and perspectives” (Winterton et al, 2006:6).

There are different dimensions to knowledge:

- Know-that – which is acquiring “explicit factual knowledge”
- Know-how – which refers to “procedural knowledge” but “is often associated with tacit knowledge” and
- Know-why – which can be termed “understanding (and) refers to more holistic knowledge of processes and contexts”.

It is “often argued that acquiring explicit factual knowledge” has to “precede developing procedural knowledge, which relates to using knowledge in context” (ibid., 2006:7).

Turning to *skill*, “skill has been defined as: goal-directed, well-organised behaviour that is acquired through practice and performed with economy of effort”. Skill “is usually used to refer to a level of performance, in the sense of accuracy and speed in performing particular tasks” - thus we may speak of a “skilled performance” (Winterton et al, 2006:7). In terms of ‘skilled performance’ and ‘skill’, think about our national soccer team: when it comes to Bafana and a Bafana player ‘skilled performance’ and ‘skill’ are terms that we are likely to use very rarely.

Performance at a certain level or skill requires “physical psychomotor abilities”, without which it would be difficult to perform at certain levels - think here about an Olympic gymnast. However, it also requires “mental cognitive abilities...such as problem-solving and decision-making”, which as distinct from knowledge are skills. The ability to “operationalis(e) knowledge” can also be considered as “part of developing skills” (ibid., 2006:7).

As a way of highlighting the difference between knowledge and skill, think about the fantastic ability that outstanding soccer players like Ronaldo of Manchester United have in bending the soccer ball above or around defences to score from free-kicks. Such a capability is not innate but comes from hours and hours of dedicated and disciplined training and practice. What Ronaldo possesses is a brilliant *skill*. It has nothing to do with *knowledge*-such as that possessed by a professor of physics who can explain the flight of the ball in terms of aerodynamics, the shape and construction of the ball, the speed and movement of the leg, knee and foot, and so forth. Ronaldo has no such *knowledge* and does not need it. If he possessed such knowledge it could help, but this would still not provide him the skill of bending a football around or above a defence.

We can extend the example of Ronaldo to also illustrate that “mental cognitive abilities... such as problem-solving and decision-making” are skills rather than knowledge. Ronaldo also has the wonderful ability to make split-second decisions about when to cross the ball or thread a pass and with what pace to Rooney or Berbatov, and to solve the problem of how to get around defenders or to draw defenders away in such a way as to create spaces for Rooney and Berbatov to score. There are important “mental cognitive abilities” but they are not knowledge.

As far as expertise is concerned this is “typically... acquired through many years of intensive, deliberate practice in a particular domain” (Winterton et al, 2006). A combination of knowledge, skills, and other capabilities characterise people who can be considered to be experts.

Winterton et al make two other very important points. The first is that “the idea that generic (knowledge and skills) are transferable across different knowledge domains has been widely questioned and regarded as mechanistic and reductionist” (2006:8). The second is that the level of competence “is a characteristic not only of a person but also of a context; people do not have competences independent of context” (ibid., 2006:8).

We can add that the performance of people is not only related to their capabilities but also shaped by environments, organisational settings, institutional cultures and interaction with others. This is precisely why inclusive, embracing institutional cultures that value, respect and affirm creativity, difference and diversity are so important. It is all too evident that too many capable men and women, and especially black and women South Africans, are incapacitated by unfavorable and stultifying institutional cultures.

With respect to *attitudes*, which have to do with our mindset, way of thinking, outlook, conduct and approach to issues and tasks, we can distinguish them from knowledge and skills and also illustrate their importance in the following ways. First, while absence of or lack of effective leadership, management and administration could be related to lack of knowledge and skills, corruption and fraud often have little to do with the lack of knowledge and skills as much as with inappropriate values and attitudes. Indeed, those who are corrupt and commit fraud often possess extensive knowledge and skills which they harness for their criminal activities. Second, when there is tardy service meted out to citizens by the public service or to customers by businesses, the problem sometimes is not so much a lack of knowledge or skills as much as unfortunate attitudes. Lastly, when some teachers with degrees and postgraduate diplomas shirk their important responsibilities to educate our children and youth and engage in unbecoming conduct, it is again not knowledge or skills that are the problem as much as unfortunate attitudes. On the other hand, there are many people that for various reasons have been denied knowledge and skills, or who have inadequate knowledge and skills, but who nonetheless through their exemplary attitudes make a sterling contribution to our economy and society. It should be clear that while knowledge and skills may be necessary conditions, they are not sufficient conditions for the development of our economy and society and for realizing social equity and justice. Attitudes also matter!

In summary, if we are to produce competent people who can contribute to economic and social development, we need:

- To understand that “competence is...multifaceted, holistic and integrated” and comprises of cognitive, functional and social competences (Winterton et al, 2006:13).
- To give attention to cultivating through education, training, and development initiatives and interventions *knowledge, skills* and *attitudes* in the appropriate combinations and configurations required for specific occupations and professions.

This implies that we must distinguish between general and generic knowledge and “generic skills” (communication, writing and presentation skills, numeracy, IT) and “domain-specific knowledge and skills”, which may be more specialised and “knowledge and understanding appropriate” that is for specific occupations and professions (ibid., 2006:13).

- To appreciate that that “it is not simply knowledge and skills that matter but also their application” in different occupational, workplace and social contexts (Winterton et al, 2006:13).

The South African context

I wish to now turn to the South African context.

First, it is important to recognize that the South African economy and labour market is highly differentiated. This means that the shortage that we experience of appropriately educated and trained people is varied and diverse.

Second, it is also necessary to recognize that the shortage of competent people is both *quantitative* and *qualitative* in nature – that is to say, our challenge is both the quantity of competent people that we have available, and also people who possess the requisite qualities that enable us to deem them as competent.

This requires effective responses from a range of institutions – the state, business, and, of course, schools, further education and training colleges, higher education institutions and various other education and training entities.

It is suggested that currently the information and communication technology sector (ICT) is experiencing a shortage of 30 000 people. Now in some quarters this is blamed on higher education and taken as evidence of the lack of responsiveness of higher education to the economic and labour needs of our country.

Yet, it is false to conclude that this is either the fault of higher education or to assume that higher education can do something about this. It is possible that the shortage of the 30 000 people needed for the ICT sector could be entirely satisfied by the effective training of people in National Qualification Framework (NQF) level 4 qualifications, which are *not* provided by higher education institutions.

Similarly, if the engineering sector is experiencing a shortage of 10 000 people, it cannot be assumed that this requires higher education institutions to produce 10 000 more graduates. It is quite possible that the shortage could well be resolved with no involvement of higher education institutions.

On the other hand, it could be that of the 30 000 people required for the ICT sector and the 10 000 needed by the engineering sector, x thousand and y thousand respectively require capabilities that can only be provided by qualifications at NQF level 5 and above, including certificates, diplomas, and bachelors, honours, masters and doctoral degrees. In this case,

clearly higher education institutions have an important role to play and contribution to make.

The lessons to be drawn are that we should be cautious not to make hasty, dubious, and perhaps dangerous conclusions about the shortage of personnel that we experience and how this may be addressed, and that it is vitally necessary that we think clearly about the kinds and nature of shortages that we experience. Only then can there be effective responses to the shortage of competent people.

That is to say, in the context of a labour market that is highly differentiated and comprises of a large variety of occupations and jobs, we have to become much more specific about the levels and kinds of capabilities that are required in different arenas of economic and social activity. Only then will we be able to properly consider and formulate the kinds of institutional responses and interventions that are required.

It is also important that in our consideration of person-power shortages we distinguish between shortages that are *quantitative* nature and shortages that are *qualitative* in character. In so far as the *quantitative* shortage of person-power is concerned, this refers to the problem that there are more vacancies that require people with knowledge, expertise, skills and attitudes that are produced by education and training institutions and initiatives than there are the competent people to fill these vacancies.

As far as the *qualitative* shortage is concerned, this refers to two kinds of problems. The first is that for various reasons the people that we are producing unfortunately lack the particular knowledge, expertise and skills that are required for effectively and efficiently undertaking specific professions. To the extent that such people find employment, it could be a case more of private benefits for these individuals than public benefits for society.

The second problem is that currently there are people employed in the private and public sectors that lack, in varying ways and to differing degrees, the specific kinds of knowledge, expertise, skills and attitudes that are essential for them to effectively and efficiently undertake their professions and jobs. In so far as the public sector is concerned, the existence of such people retards the building of a developmental state, constrains the capability of the state to promote economic and social development, and hinders its ability to discharge its constitutional and legal responsibilities.

An additional problem should be noted: namely, that our education and training institutions and initiatives may also be producing people that lack the values and attitudes that are appropriate for both economic development and a constitutional, non-racial and non-sexist democracy that proclaims its determination to uphold the dignity of all people.

With respect to the *quantitative* shortage of competent people needed for the economy and society, there are three key challenges:

- First, is to develop the ability to effectively identify the size and nature of the shortages and the specific arenas in which these are being experienced by the public and private sectors.

- Second, is to develop creative strategies to address the immediate needs that exist, while at the same time attention is given to medium- and long-term person-power needs.
- Third, is the need to forge robust and effective partnerships between a variety of social actors and institutions and to mobilize the resources that are required for producing the competent people needed by the public and private sectors.

In so far as the *qualitative* shortage is concerned, there are also three challenges:

- First, to the extent that education and training institutions and initiatives may be producing people that lack certain kinds of knowledge and skills and also possess inappropriate values and attitudes, it is vital that there is open and honest identification of weaknesses and shortcomings and the development of strategies for addressing these as a matter of urgency.
- Second, is to effectively identify the kinds of capabilities that people already in employment lack, the key economic and social fields in which this is a pressing problem, and the number of employees in the public and private sectors that require support; and
- Third, given that capabilities are not fixed but can be built and developed, creative strategies have to be devised for effectively building the capabilities of people already in employment.

In the case of both the quantitative and qualitative shortage of competent people it is important that there is a long-term view. The shortage of competent people will not and cannot be solved overnight and by quick fixes. It requires high quality education and training institutions and programmes and in this regard a key challenge is institution-building: developing and enhancing institutional capacities, and strengthening the capabilities of the people that occupy institutions, and especially the educators.

A major challenge is to effect significant improvements in the quality of schooling. South Africa has almost universal enrolments in primary and secondary schools. However, as has been noted, the harsh reality is that enrolments do not mean attendance and attendance does not mean learning. 20% of secondary schools produce 80% of the students who are eligible to attend universities. These are not issues that will be resolved overnight – but there simply must be greater determination and political will.

It is vitally important to also confront a popular and fashionable notion: namely, that South Africa is best served if its educational institutions emphasise technical ‘skills’ development and prioritize professional, vocational and career-focused qualifications and programmes.

It is not in dispute that our schools, colleges and universities must effectively prepare students to participate in our economy. Our students must be able to cope with the considerable and ever-changing demands of the work place. They must be able to think, and strategize, be creative and adaptable, and learn quickly. They must also have a work ethic if they are to effectively contribute to building a developmental state in South Africa and to

support our firms, enterprises and economy to be globally competitive and navigate the challenges of globalisation.

However, a purely utilitarian and instrumental approach to education which seeks to entirely or largely reduce its value to its efficacy for economic growth is misguided and extremely dangerous. This completely misunderstands the value of education and denudes it of its considerably wider social value and functions, especially in a society such as South Africa which as a consequence of its colonial and apartheid past has formidable social challenges.

In the *Financial Times* of 1 February 2007 Martin Wolf writes: “We talk as if nothing mattered except the country's ability to create material wealth” and criticizes Britain’s skills agenda and its “emphasis on practical utility”. He states:

This narrow agenda now dominates policy for education and training. What, the reader might ask, is wrong with that? Why should anybody pay attention to airy-fairy notions of education for its own sake? The answer is straightforward: these attitudes represent not merely a confusion of means with ends. They represent a perverse placing of means above ends.

Education is also a goal in its own right. If we must put this in economists' language, we can say that understanding is a form of wealth.

Wolf goes on to add:

All this, however, today's depressingly utilitarian debate implicitly rejects. Thus the reason for compelling young people to stay on in school...is to make them not wiser or even better citizens, but more productive. Yet to glory in the utilitarian over the fulfilling, and in practical knowledge over understanding, is more than a mistake; it is perverse.

This is financial correspondent who unusually displays great insight – in that he understands that education has intrinsic significance as an engagement around humanity’s intellectual, cultural and scientific inheritances and around our understandings, views and beliefs regarding our natural and social worlds; and that education is also intimately connected to the idea of democratic citizenship and the “cultivation of humanity” (Nussbaum, 2006:5).

In the light of our colonial and apartheid past, we would be extremely myopic if we imagine that the South African economy requires only technically capable people instead of people who are simultaneously also deeply human and sensitive to issues of difference and diversity and social equity and justice. As the Vice Chancellor of the University of Western Cape, has put it, we are also “tasked with the arduous formation of a critical, creative and compassionate citizenry” (O’Connel, 2006).

Conclusion

In conclusion I have four pleas.

The first is that in response to Alice's question "*can* you make words mean so many different things", and with respect to whether 'skills' can have so many different meanings, we answer 'No'. It is not helpful to either blur or collapse the distinction between skills and knowledge. They are different and both are important. Also equally important are values and attitudes.

There may be moments when we may need to prioritize the acquisition of skills, and specific skills in particular. In general and in the long run, however, if the goal is preparing competent people that can enhance economic and social development and also contribute to the consolidation, extension and deepening of democracy, the discourse we have to cultivate is one that unambiguously privileges *knowledge, skills and attitudes*.

The third plea is that as much as skills matter, we have to recognize that knowledge and understanding also matter and are crucial, and that we begin to value and show greater appreciation for knowledge. This plea is especially directed at politicians and business persons, and more generally at those who yearn for quick-fix solutions when there are none.

Finally, while we must insist that our education and training institutions are responsive, the responsiveness that we demand of them must not only be of an economic nature but also of a social, cultural and intellectual nature. This means that our education and training institutions must produce competent people who are technically capable *as well as* ethical and compassionate in character, with an understanding of their constitutional obligations and citizenship responsibilities.

References

O'Connel, B. (2006) 'Higher education, society and the economy'. Text contributed to Higher Education South Africa document for the President's Higher Education Working Group meeting

Nussbaum, M. (2006) *Education for Democratic Citizenship*. Institute of Social Studies Public Lecture Series 2006, No. 1. The Hague: Institute of Social Studies

Winterton, J., Delamare, F. and Stringfellow, E. (2006) *Typology of knowledge, skills and competences: clarification of the concept and prototype*. Cedefop Reference series; 64 Luxembourg: Office for Official Publications of the European Communities

Wolf, M. (2007) 'Education is a worthwhile end in itself'. *Financial Times*, Thursday, 1 February 2007; <http://www.FT.com>