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Indigenous Epistemologies^{*}, Sustainability and Schooling: The Case of South Africa

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1. Introduction

The concern I want to raise in this chapter is related to the relationship between indigenous identities, knowledge systems and indigenous values and world views compared to world views found in South Africa's new curricula after new dispensation. What are the values the indigenous pupils meet at home? Do they concur with those of the new curricula after 1994? The rationale for this focus is related to the question of whether the South African primary school is 'their school', i.e. the school for the majority of South African children in terms of culture and knowledge. Moreover, does the epistemological basis of South African schools promote a sustainable future for the 'new' nation? The interest in and focus on indigenous identities and knowledge systems has been fuelled by the emergence of the African Renaissance rhetoric as proposed by Nelson Mandela and more consistently and frequently by former president Thabo Mbeki. Their focus is related to wishing to build a nation where African values, knowledges and African heritage are central. While the rhetoric around a new birth for Africa and African Renaissance is much older (Zeleza, 2009), in this chapter I am primarily concerned with the use of the concept in South Africa after the 'liberation' of South Africa in 1994. Already in 1994 Mandela referred to African renaissance at a summit of the Organization of African Unity in 1994: "Africa cries out for a new birth. We must, in action, say that there is no obstacle big enough to stop us from bringing about a new African renaissance" (Mandela, 1994).

Former President Mbeki followed this up in 2002 by stressing the importance of self-construction.

We have a duty to define ourselves. We speak about the need for the African Renaissance in part so that we, ourselves, and not another, determine who we are, what we stand for, what our vision and hopes are, how we do things, what programmes we adopt to make our lives worth living, who we relate to and how (Mbeki, 2002).

While African renaissance takes a step back to focus on the past (as well as exploring the present) to construct an African identity/ identities based on African heritage and African values and indigenous epistemologies and knowledges the concept is also future- oriented 'who we should be': a new beginning for Africa yearning for a better future. The return to

^{*} Epistemologies and knowledges are used in the plural to denote the multiplicity of indigenous epistemologies/knowledges

the past is a way of signaling that what was negated during the apartheid regime, the 'Africaness' of South Africa, the indigenous knowledge systems and values, also meant a negation of African identity which now needs to be restored to effect a viable future. African Renaissance, in Mbeki's rhetoric, means that (South) Africa and African identities are to be "shaped by African philosophies and not be limited by Western constructions" (Mbeki, in Kubow (2009), 47). African philosophy and indigenous knowledges seek to affirm core African values in the face of and as a response to globalization, and to establish an indigenous identity/indigenous identities for a sustainable future.

An African Renaissance which does not degenerate into essentialism has, according to Mbeki, the potential to change the lives of many Africans who have been ravaged by the continuing legacy of colonialism. African Renaissance thus embraces the view that Africa is destined to make considerable progress in economic, political and spiritual values by suggesting some sort of a rebirth where South Africa has a leading role to play.

It is this dialectics between African past/ presence including indigenous knowledges, identities and spiritual values on the one hand and the political, future -oriented world on the other that may seem to constitute this rebirth.

In this chapter I want to further explore the 'cultural world' of African Renaissance, i.e. African heritage/identity and African, indigenous knowledge systems as a constitutive element of Africa's 'rebirth' and a new, sustainable future. What are the characteristics of indigenous knowledges as found in the Black communities in South Africa? To what extent do they differ from the values and the knowledge production in the West? To what extent do they constitute a sustainable alternative or supplement to the West?

My own ethnographic research in South Africa was an exploration of the culture, cultural values and indigenous knowledges among the Xhosa in Western Cape and in Eastern Cape (see also Breidlid, 2002).

Qualitative data collection techniques were used and both community leaders, teachers, parents and parents in the communities in Cape Town and Eastern Cape were interviewed. Since the data used in this chapter are from the locations of our fieldwork, other Xhosa communities and people may have deviating cultural practices/world outlook. It must be said, though, that the findings of the research fit well with the literature in the field. While not a static or monolithic group there are certain basic features of Xhosa cultural values, indigenous knowledges and identity construction which reoccur and which seem to cut across location, age group and gender.

The results from the journey we undertook do not claim authenticity *per se* since any essentialisation of Xhosa culture and knowledge systems would be to deny their complex historicity. All notions of fixed or essentialist identities are problematic, also in the case of the Xhosa, not the least because not even the most traditional indigenous societies are static and are exposed to external influences. The focus in the following is on the religious and spiritual influence, not the least because it impacts heavily on the Xhosa identity construction and world outlook.

The journey underscored what Hunter (1979) claims is a difference between Bantu culture and European culture(s) where the Xhosa to a very large extent is born into traditional ties where choice and agency are limited, and where tradition and place are guarded. The post-

modernist insistence of identity as something always fluid, with hardly any boundaries, does not quite fit the terrain of our ethnographic research in Xhosa territories. While there are border crossings among the Xhosa in terms of identity construction there is also an anxiety “about the breakdown of barriers supposedly containing an identity?” (Massey, 1994: 122). It is also worth noting that the Xhosa does not constitute one group where all members were uniform in terms of beliefs, traditions, impact of foreign influence etc. Nevertheless there is a sense that the recovering of an African heritage is linked to tradition, not necessarily in terms of nostalgia for a utopian past, but in terms of the lived lives in the Xhosa communities.

In my research in the Xhosa communities two rural (Eastern Cape) and one urban community (township in Cape Town) were explored, with a particular focus on which elements constitute the identity construction of the Xhosa. Even though there are obvious differences between rural and urban Xhosa communities, certain fundamental issues seem to transcend the urban-rural divide, most notably linked to identity construction. I will first argue that the identity construction among the Xhosa is very much linked to the notion of place and territory. Then I move on to analyze the link between place and indigenous religious practices and identity construction. Finally I argue that despite what I call the Xhosa multiple identities, with their interplay and intertextuality between various cultural and religious practices, these identities are to a large extent defined in terms of an indigenous place or territorial specificity not worked over by modern values.

Place, defined as “the experience of, and from, a particular location with some sense of boundaries, grounds, and links to everyday practices” (Escobar 2001, 152) constitutes an important reference point in the construction of Xhosa identities, both in the rural and urban areas, most notably, but not exclusively in terms of indigenous, religious practices. The focus on the concreteness and territorialization of place, as opposed to the more abstract notion of space can be interpreted both as a defense of status quo and a way of sustaining or reconstructing alternative worlds. This tradition and place -related identity seems to represent resistance to the erasure of place and rootedness in (post-) modern thinking, and the conservation and protection of place and territory as something sacred.

Whatever the rationale, conscious or unconscious, the importance of place and boundaries as a sanctuary and a location of identity construction in the Xhosa world is unmistakable. It does not mean that the construction of identity is fixed or unchangeable, but it means, particularly among the rural Xhosa, that identity construction very often is also bound to a geographical place or location.

Place is both a physical location and a carrier of meaning which is, I argue, more prevalent in the Xhosa communities than in most Western societies. According to Giddens the emphasis on place indicates a culture bound up in tradition whereas modern societies transcend place and is more space oriented (Giddens, 1991). It follows from the space-orientation of modernity that place and territory do not carry a significant meaning as an identity marker, and are thus open to conquest and exploitation. While there are, as noted, border crossings by members of a more traditional society like the Xhosa the border crossings seem less frequent than in so-called modern societies.

While identity construction among the Xhosa is very much linked to place as a constitutive factor, place again is linked to indigenous epistemologies/worldviews realized in spiritual

and religious ceremonies, rituals and other practices. Even though there are aspects linked to indigenous cultural practices other than religion or spirituality, religion and spiritual practices are the *sine qua non* of Xhosa identity, thus underlining the sanctuary and sacredness of place and territory.

The holistic nature of the interrelationship between place/territory/nature, man and the supernatural is foundational in the Xhosa communities, and differs from the western perception of knowledge which separates people from place and nature physically and through the systems of knowledge, belief, politics and economics which it imposes.

In the indigenous religious system the ancestors stand out as probably the most important pillar. The informants underlined the importance of rituals in their veneration of the ancestors. As one informant told us:

In our tradition we worship the ancestors. That is our connection with God. We believe something is superior- ancestors. I must do things for the ancestors. Spiritually I have to go to church, but the traditions must also be there. If you don't do what you are supposed to do, bad things happen. (rural male teacher)

The various types of rituals function as communication channels to the ancestors and takes place in the homestead where people also ask for advice on matters like marriage, jobs etc. The homesteads thus function as a site of negotiations between the living and the dead and are thus place not only of identity construction, but also of cohesion.

Clearly the ancestor cult is, as Hunter states, a sanction for the respect for seniors upon which the social and political system is based (Hunter, 1979: 266), and indicates that this type of pervasiveness can be seen, paradoxically enough, as a logical or rational response to the insecurity that the Xhosa population faces in their daily lives.

While the overwhelming majority of our informants seemed to be most comfortable with their Xhosa religious identity they also confessed to be Christians. The strong influence of Christianity does not, paradoxically enough, seriously shake the place-boundedness of their belief system. These belief systems are not, according to the majority of our informants, mutually incompatible; on the contrary, there is an interplay or a dialogue which nourishes both systems.

There is a sense that despite the intertextuality and dialogic exchange between various value systems, the indigenous epistemological orientation is retained, not only as a means of social cohesion, but as a fundamental element of Xhosa indigenous identity construction. Our research findings go to show that the multiple identities among the Xhosa are a complex construct where border crossings are taking place, where identities are multiple due to the multiplicity of influential relations, but where these relations are located differently in terms of significance and where place, territory and home are in most cases the most important constitutive factor. To tamper with place is thus not only seen as a violation of ancestral land and the sacredness and spirits of nature, but as an obstacle to identity construction. It is in this perspective the 'cultural world' of African renaissance must be seen and which accounts for Hunter's statement that the Xhosa (Bantu) culture is widely different from European cultures.

The view in indigenous knowledges of the interrelationship between man, nature and supernatural and the perception of nature, place and territory as something sacred that is not

to be tampered with is a necessary corrective to rational science's excessive exploitation of nature and the contemporary ecological degradation of the planet with the accompanying global warming. Indigenous knowledge challenges the epitomisation of scientific truth and rationality that has excluded values which transcend the so-called rationality dogma of the West. This denial of epistemological diversity and the privileging of European epistemic monoculture is still hegemonic and perceived as a sign of development and modernity whereas it in reality upsets the relationship between man and nature through ecological degradation, seeking to possess the earth in the same way as a master exploits his slave. While colonialism and the capitalist world system have been beset with territorial, political and economic conquest Western science is based on the same idea of conquest, not respecting the earth's ecological limits. The unsustainability of such an epistemological perspective is challenged by the knowledge that the majority children bring from home in South Africa.

Since Xhosa pupils originate in an environment where knowledge is linked to spirituality, the encounter with modern schooling and the rationality of Western epistemic hegemony is often problematic. There is a tension here since, I will argue, the potential lack of recognition of their own epistemological and spiritual background impedes the development of the pupils' full potential. Taking cognizance of the indigenous pupils' spirituality Ver Beek points out that indigenous people's spirituality gives them "a sense of power and hope" (Ver Beek 2000 : 32).

In the next subsection I therefore focus on the new curricular situation after the 1994 revolution in South Africa and to what extent the curricula addresses epistemological issues related to the background of the majority of the children in the country.

Education and sustainability in South Africa

The introduction of Curriculum 2005 (C2005) in South African schools in 1997 (DoE 1997a and b) and the Revised National Curriculum Statement for GET (the General Education and Training Band (up to Grade 9)) in 2002 (DoE, 2002) was looked upon by the South African government as an important tool in the transformation of the South African society.

C2005 was well received, "falling on fertile ground ripe for alternatives to the divisive apartheid curriculum...Quite simply, the nation, particularly teachers and the media, embraced the story it told and the *ideological* (my italics) turn it promised" (DoE 2009, 12). Both versions of the curriculum (C2005 and the Revised National Curriculum Statement for GET) are clearly *in principle and rhetorically* ideologically counter-hegemonic to the dominant hegemony of the apartheid days. As we have seen this was stated quite explicitly in the preamble of C 2005. The apartheid hegemonic ideology and culture has been replaced by an anti-racist and anti-sexist curriculum.

The important question for the purposes of this chapter is however what happened to the African Renaissance rhetoric and Mbeki's focus on African heritage and local, indigenous knowledges? Has African Renaissance in any way functioned as an ideological compass for the curriculum writers? Is there an ideological difference between C2005 and the Revised Curriculum Statement in this respect?

In the South African context after 1994, and particularly in relation to C2005, the government interpellated the population into believing that the transformation of the educational system is under way by bombarding the people with important ideas like

democracy, social justice, equity and equality etc. Needless to say these were ideas or concepts which had to become part of the education system if the transformation of South Africa were to take place. But as will be documented later in this chapter, these ideas were situated in a context, both educationally, ideologically and macro-politically, which made the implementation of these principles into school reality difficult to envisage. Moreover, the ideological thrust of the government's school policy was so massive that both interrogations into the curriculum and any other counter-hegemonical interventions into the education policy were very difficult, if not impossible.

In the introduction to C2005 it is stated that, "The curriculum be restructured to reflect the values and principles of our new democratic society, (DoE, 1997a, 1). Such a statement is probably intentionally- so vague and ambiguous that one wonders what is to be included and excluded from the variety of values, world views and knowledge systems in South Africa, with the exception of apartheid values. When C2005 proposes to establish "A shared understanding of a common South African culture," (DoE, 1997a, 16), the question arises if this is possible. What is a common South African culture? Since it is difficult to find a country, a nation with a clear-cut culture and since individuals, also in the South African context, construct, as has been noted in the first part of this chapter, multiple identities such a national identity has to be constructed. And if a common South African culture were to be constructed one would expect that the majority Black culture(s) to some extent would be prioritised since the Black population in South Africa constitutes approximately 80 per cent of the population.

On closer analysis of the two curricula, however, it is clear that this has not happened. The slogan: 'a common South African culture' does not mean that the cultures, world views and knowledge systems of the majority populations figure prominently in the new curricula. On the contrary, even though indigenous epistemology is referred to in the Revised National Curriculum (2002), the curriculum is modelled on a Western discourse, depending heavily on different international contexts, especially from New Zealand and Australia (DoE, 1995), suggestive of "what the African scholar Chinweizu describes as "Europhiliac Africans" (Chinweizu, 1970). Given this primary influence it is clear that the curricula and the education discourse of the new dispensation continue the epistemological hegemony of the West by marginalising indigenous epistemologies (see also Breidlid 2003).

The Revised National Curriculum (2002) touches upon the fact that people move between different worldviews and knowledge systems in a day:

... the existence of different world views is important for the Natural Science Curriculum...Several times a week they cross from the culture of home, over the border into the culture of science, and then back again (DoE, 2002, Natural Sciences: 12).

This epistemological movement is confirmed by for example Fakudze who states that "the African child finds him/herself having to cross the cultural border between his/her African worldview and that of school science as he/she learns scientific concepts presented to him/her in the science classroom" (Fakudze, 2003: 132).

This movement was also exposed in our field-work, where many teachers, like the pupils, cross cultural and epistemological borders on the same day, teaching Western science at school and taking part in traditional practices at home. The question then is how pupils and

even teachers cope with a knowledge system in school, which is alien to their home universe? And moreover, how can school construct a common South African culture when the majority cultures are sidelined?

The Revised National Curriculum senses a critical challenge here, asking:

...Is it a hindrance to teaching or is it an opportunity for more meaningful learning and a curriculum, which tries to understand both the culture of science and the cultures at home? (DoE, 2002, Natural Sciences: 12).

The cultural border crossings have been identified by Bernstein (1971) as a big problem for working class youths in middle class schools in England. These border crossings, however, important and difficult they may be, seem of a much more limited, cultural-linguistic character than what can be observed in South African schools. Among Xhosa children it is not only a matter of linguistic code switching, but of a collision of knowledge systems and world views which is of a far more serious and substantial character than class barriers in school in England. The Revised National Curriculum signals that these challenges will be dealt with in curriculum development:

Science curriculum development, which takes account of world-views and indigenous knowledge systems is in its early stages and will be addressed with enthusiasm by many educators. This Revised National Curriculum...is an enabling document rather than a prescriptive one (DoE, 2002, Natural Sciences: 12).

The crossing of epistemological borders to accommodate the so-called modern, rational world of science means that the pupil, according to Ogunniyi, is "involved in negotiating and navigating a complex array of conflicting mental states. He must synergize these conflicts into a more comprehensive world-view capable of accommodation of the new experience within the framework of intra/intersubjective life worlds, which provide him/her a sense of social identity" (Ogunniyi, 2003). The complexities of these negotiations and navigation should not be overlooked.

The revised curriculum is therefore, even though paying lip service to indigenous epistemology, firmly grounded in a modern, Western epistemology. Ntuli agrees:

Our education system seems to move farther and farther away from indigenous knowledge...There is no attempt at any level to examine the indigenous knowledge systems awareness of the essential interrelatedness of all phenomena - physical, biological, psychological, social and cultural (Ntuli, 2002: 64-65).

While we have seen that some attempts have been made in the Revised National Curriculum to include a discussion of indigenous knowledge systems, Ntuli is right in claiming that the influence of indigenous knowledge systems in education is marginal.

There is therefore, in South Africa as elsewhere in the South, an urgent need to address the issue of indigenous culture, sustainable development and education. When the thinking and acting of the majority of the people in a country, that is, their cultural expression and epistemology, are more or less excluded from the curriculum in the country, it does something to the self-confidence and self-esteem of those people, besides the obvious learning challenges it creates in school. What the curriculum should do "... is to help the people and their elite to capitalise and master the existing knowledge, whether indigenous

or not, and develop new knowledge in a continual process of uninterrupted creativity, while applying the findings in a systematic and responsible way to improve their quality of life.” (Hountondji, 2002: 36).

Moreover, the lack of inclusion of indigenous epistemologies deprives not only the children of their own heritage, but also fails to make the new generations aware of alternative worlds and epistemologies that challenge the hegemonic knowledge production in the West and thus its unsustainability. The prioritisation of non-indigenous knowledge also means an underutilization of indigenous resources and knowledge in the development of a given society.

An exclusion such as that described above has major implications for the distribution of power in the country where those with non-indigenous cultural capital (including the Black elite who often do not identify with the African Renaissance rhetoric) are in the driving seat. The democratic problems of such a situation are obvious. A more comprehensive inclusion of indigenous knowledges may threaten power relationships based on Western knowledge, and possibly the reproduction of hierarchical structures benefitting those in power. As Silito states: “The privileging of some knowledge over others will extend a degree of power to those who hold that knowledge...” (Silito, 1998).

As has been noted above the African National Congress (ANC) has been reluctant to undertake a more radical reorientation in educational policies which includes innovative educational strategies to meet the needs of the majority of South Africans, and the South African society *in toto*. There seems to be a fear that such new strategies will leave South Africa out of the process of globalisation (see Crossman & Devisch, 2002). Moreover, the authorities may worry that a more contextualized and epistemologically more appropriate curriculum might leave the successful school leavers at a disadvantage internationally even though research has clearly shown that the present educational system under the ANC regime puts the majority of school children at a disadvantage. There is therefore reason to question the sustainability of the present system, not only in terms of academic success among the Black students, but also in terms of a future sustainable development in South Africa.

The incorporation of indigenous knowledge systems on its own terms also depends on the results of further research into the characteristic features of indigenous cultures and knowledge systems. While there is no doubt that this potential has been grossly underutilised in the past, the potential and contributions of indigenous cultures and knowledge systems in relation to sustainability and sustainable development should not lead to the temptation, as Hountondji reminds us, “to overvalue our heritage”, and we should bear in mind that indigenous knowledges “can be said to be less ‘systematic’ than scientific knowledge” (Hountondji, 2002: 25). This is in line with Silito’s warning that “we need to guard against any romantic tendency to idealise it.” (Silito, 1998, 227).

There is, however, no doubt that there is an urgent need to address the world’s poor health with alternative epistemologies that have a more non-exploitative view of land and nature. Indigenous knowledge’s more harmonious relationship to nature is therefore vital in the struggle for a sustainable future.

The UN Decade of Education for Sustainable Development (UNESD, 2005) signals the important role education is supposed to play globally (see also Breidlid, 2009). According to

the UN, education is “one of the most effective forces to bring about the changes in knowledge, values, behaviour and lifestyles required to achieve sustainability and stability within and among countries. . .” (UNESCO Media, 2008, p. 39).

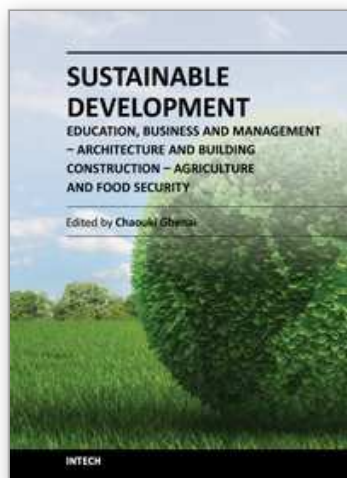
As has been suggested in this chapter, however, education’s role in sustainable development is not unproblematic, since the hegemonic education discourse is more or less exclusively based on Western epistemology. This situation is a far cry from the ideas of African heritage and African culture and indigenous knowledges promoted by the African Renaissance rhetoric. Unfortunately it seems as if the re-launch of the concept (African Renaissance) was primarily rhetorical when the concept re-emerged after the new dispensation in 1994, and it still remains primarily rhetorical. As has been noted the global debate on education and sustainable development does not even pay lip service to the African Renaissance rhetoric or to indigenous knowledge systems. There is therefore an urgent need to interrogate the epistemological foundation of for example the UN Decade of Education for Sustainable Development. Such a UN decade is meaningless if it does not critique in a fundamental way the exploitative nature of the hegemonic Western epistemology and does not pick up and incorporate alternative voices and epistemologies, not only for the identity construction of those groups who have been marginalized over the centuries, like the Blacks in South Africa, but for the sustainability of Mother Earth. Educational institutions and educational actors in addition to the UN carry a huge responsibility as well in opening up the epistemological terrain for a more sustainable future. The formidable task has only just begun.

2. References

- Beek, K. A. Ver. (2000). 'Spirituality: a development taboo', *Development in Practice*, 10:1, 31 - 43
- Bernstein, B. (1971). *Class, Codes and Control: Theoretical Studies Towards a Sociology of Language*, vol. 1. Routledge and Kegan Paul Ltd., Boston.
- Breidlid, A. (2002). Schooling, tradition and modernity in South Africa. *UWC Papers in Education* 2, 37-50.
- Breidlid, A., (2003). Ideology, cultural values and education: a critical analysis of Curriculum 2005 in South Africa. *Perspectives in Education* 2, 83-103.
- Breidlid, A. (2009). Culture, indigenous knowledge systems and sustainable development: A critical view of education in an African context. *International Journal of Educational Development*, Volume 29(2), 140-149.
- Chinweizu(1970). *The West and the Rest of Us*. New York: Random House
- Crossman, P., Devisch, R. (2002). Endogenous knowledge in anthropological perspective. In: Odora Hoppers, C.A. (Ed.), *Indigenous Knowledge and the Integration of Knowledge Systems*. New Africa Books, Claremont, Cape Town, 96- 128.
- Department of Education. (DoE). (1995). *National Qualifications Framework. Working Document*. Government Printer, Pretoria.
- Department of Education. (DoE). (1997a). *Policy Document. Foundation Phase*. Government Printer, Pretoria, Quoted from the Western Cape Education Department edition.
- Department of Education. (DoE).(1997b). *Policy Document. Intermediate Phase*. Government Printer, Pretoria.
- Department of Education. (DoE). (2002). *Revised National Curriculum Statement*. Government Printer, Pretoria.

- Department of Education (DoE). (2009). *Education Task Team*. Government Printer, Pretoria
- Escobar, A. (2001). Culture sits in places: reflections on globalism and subaltern strategies of localization. *Political Geography* 20, 139–174.
- Fakudze, C.G. (2003). The nature of world views held by Swazi high school students. In: Ogunniyi, M.M., Rochford, K. (Eds.). *The Pursuit of Excellence in Science and Mathematics Education*. University of Western Cape, Cape Town, 58–63.
- Giddens, A. (1991). *Modernity and Self-Identity. Self and modernity in Late Modern Age*. Cambridge: Polity.
- Hountondji, P.J. (2002). Knowledge production in a post-colonial context. In: Odora Hoppers, C.A. (Ed.). *Indigenous Knowledge and the Integration of Knowledge Systems*. New Africa Books, Claremont, Cape Town, 23–39.
- Hunter, M. (1979). *Reaction to Conquest Effects of Contact with Europeans on the Pondo of South Africa*. David Philip: Cape Town.
- Kubow, P.K. (2009). Democracy, identity, and citizenship education in South Africa: Defining a nation in a post-colonial and global era. In J. Zajda, H. Daun, L.J. Saha (Eds.), *Nation-building, identity and citizenship education: Cross-Cultural Perspectives*. (Book series: *Globalisation, comparative education and policy research* (Volume 3). London: Springer.
- Mandela, N. (1994). Statement by President Nelson Mandela. OAU Meeting, Tunis, 13 June 1994. South African Government Information. Accessed on July 12 2011 at www.info.gov.za/speeches/1994/171095017.htm
- Massey, D. (1994). *Space, Place and Gender*. Minneapolis : University of Minnesota Press
- Mbeki, T. (2002). *Africa: Define Yourself*. Tafelberg Publishers Ltd: Cape Town
- Ntuli, P.P. (2002). Indigenous knowledge systems the African renaissance. In: Odora Hoppers, C.A. (Ed.). *Indigenous Knowledge and the Integration of Knowledge Systems*. New Africa Books, Claremont, Cape Town, 53–67.
- Odora Hoppers, C.A. (Ed.), 2002. *Indigenous Knowledge and the Integration of Knowledge Systems*. New Africa Books, Claremont, Cape Town.
- Ogunniyi, M.B. (2003). Traditional cosmology and science education. In: Ogunniyi, M.B., Rochford, K. (Eds.). *The Pursuit of Excellence in Science and Mathematics Education*. University of Western Cape, Cape Town, 22–30.
- Sillitoe, P. (1998). The development of indigenous knowledge. A new applied anthropology. *Current Anthropology* 39 (2), 223–235.
- UNESCO Media, 2008. Accessed on May 15 2008 from <http://unesdoc.unesco.org/images/0015/001587/158787e.pdf>.
- UNESD (2005). UN Decade of Education for Sustainable Development (2005-2014) accessed on July 12 2011 at <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/>
- Zezeza, .P.T. (2009). What Happened to the African Renaissance? The Challenges of Development in the Twenty-First Century. *Comparative Studies of South Asia, Africa and the Middle East*, Volume 29, Number 2, 2009, 155-170

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Securing the future of the human race will require an improved understanding of the environment as well as of technological solutions, mindsets and behaviors in line with modes of development that the ecosphere of our planet can support. Some experts see the only solution in a global deflation of the currently unsustainable exploitation of resources. However, sustainable development offers an approach that would be practical to fuse with the managerial strategies and assessment tools for policy and decision makers at the regional planning level. Environmentalists, architects, engineers, policy makers and economists will have to work together in order to ensure that planning and development can meet our society's present needs without compromising the security of future generations. Better planning methods for urban and rural expansion could prevent environmental destruction and imminent crises. Energy, transport, water, environment and food production systems should aim for self-sufficiency and not the rapid depletion of natural resources. Planning for sustainable development must overcome many complex technical and social issues.

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