

## **“Towards a sustainable global community – What should universities be doing?”**

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### **1. Introduction**

I find the theme of this discussion (“Towards a sustainable global community – What should universities be doing?”) very appropriate. The planet’s environmental systems are under tremendous strain, humanity’s financial and socio-political systems are creaking, and higher education is reflecting the pressures bearing down on it from all sides.

Around the world – at this point, early in the second decade of the 21st century –universities are taking a long, hard look at themselves. Times are changing, and we have to redefine our place, role and function in society.

What is clear is that we cannot continue along the same path as before. But what direction do we take? At such moments it is prudent to analyse our context thoroughly and to look at our strengths as a sector. What is also useful is to share ideas.

I want to tell you about our experiences at Stellenbosch University (SU), and also hear what you are going through at your institutions. The aim is that we shall emerge from this discussion better informed about the challenges that we face and the options open to us in responding to them.

### **2. Responsibilities of a 21<sup>st</sup>-century university**

As we grapple with the issue of what our institution will look like in years to come and what type of place it will become, one question that we should consider is our contribution to society.

As an “engine of development”, as Castells<sup>1</sup> termed them, universities are well placed to respond to the challenges of our time – by equipping graduates with both the technical knowledge and the broad attitude and values required to flourish in the knowledge economy, which continues to show large inequalities. For this reason, it is incumbent upon universities to promote human development.

Universities have the mandate and the intellectual resources to plan and stimulate, and get involved in activities that will ensure service delivery to the poorest of the poor in society.

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<sup>1</sup> See Manuel Castells, *The University System: Engine of development in the new world economy* (Washington DC: The World Bank, 1991); and Manuel Castells, “Universities as dynamic systems of contradictory functions”, In: Muller, J, Cloete N and Badat S, eds. *Challenges of Globalisation: South African debates with Manuel Castells*, (Cape Town, South Africa: Maskew Miller Longman, 2002).

Universities need to produce graduates for the public good, impart knowledge and produce professionals who directly and indirectly impact on macroeconomic institutions, on innovation and on the quality of human resources.

There seems to be four areas of responsibility for us as universities – and at their core are our students. We are preparing them for contributing to the economy; for participating in political life; for participating in society broadly; and for global citizenship. These are serious responsibilities for universities everywhere, so let us unpack them one by one.

## **2.1 Economic sphere**

In terms of the economy, what we are talking about is the university as a driver of a knowledge economy on the one hand; and on the other, the university producing people who will be working in the economic sphere once they graduate.

Research has pointed out that higher education and the workplace share a misunderstanding about each other's role: "Employers sometimes voice concern over the quality of graduates exiting from universities, while higher education feels that employers are not fully appreciative of what qualities and skills these graduates do possess, write Griesel and Parker in their 2009 baseline study on graduates in South Africa.

In my country and, I am sure, in yours "there is pressure on higher education from both government and employers to produce graduates who are employable in the sense that they have the attributes, capabilities and dispositions to work successfully."

## **2.2 Political sphere**

But universities should not only educate and shape people who are competent and equipped for professional life. We need to also create people who will play important roles as responsible and critical citizens. How do we do that? How do we build democracy?

On the level of values, universities can instil in their students an understanding of and respect for human diversity, heterogeneity and interdependence, which is becoming ever more important in the context of the societal conflicts thrown up by globalisation.

Pieterse (2010:3) argues that the university "has a purpose beyond knowledge production and training graduates for their profession", namely "preparing students to be democratic citizens in a cosmopolitan world."

## **2.3 Social sphere**

The issue of social participation relates to how we stimulate social entrepreneurship, how we build up society, how we strengthen civil society. Graduate attributes should go beyond technical knowledge. It should include qualities that prepare students to be agents for social good.

At Stellenbosch we are working on embedding these graduate attributes in the curriculum, with the aim of creating engaged citizens. Community interaction is a strong focus of our academic work and it means that our students learn that employability relates not only to technical subject knowledge but also has to do with understanding the social realities that the majority of people in society face every day, around the world.

## **2.4 Global sphere**

Global citizenship has to do with the big sustainability challenges around the world – the question of the greening of the economy, of decreasing our carbon footprint, and the energy crisis that we face as our natural resources start running out.

How do we conscientize our students about these matters? We have found that the process of raising their awareness can be boosted by creating the institutional environments wherein research and scientific endeavours are focused on the tangible challenges that communities are struggling with. By doing this in collaboration with community partners, the emphasis shifts from charity-like community service to a collaborative search for answers and solutions to life's challenges.

To inform our discussion further, let us take a look at what researchers have been saying recently about the place, function and role of universities in the world.

## **3. Discourse on the 21<sup>st</sup>-century university**

In the first place, we have Delanty (2003:71-2) noting that global society is now “less defined by the parameters of the national state.” This is a very big change, and it has a major impact on universities. Delanty (2008:29) argues that “as an institution of knowledge production, the university's contribution to society is to develop and enhance global public culture by connecting citizenship and knowledge”.

Secondly, we have Readings (1996) in his book titled *The University in ruins* describing “how the national culture mission, which he regards as the *raison d'être* of the university, is declining as a result of the weakened power of the nation-state in the wake of globalisation and the rise of transnational corporations” (Pieterse, 2010:11).

Readings makes the point that Humboldtian ideal of a “community of scholars and students” (Anderson, online) that used to be so dominant declined significantly towards the end of the 20<sup>th</sup> century. Let us remind ourselves that the function of the Humboldtian university was to “advance knowledge by original and critical investigation, not just to transmit the legacy of the past or to teach skills” (Anderson, online). So, one could say the Humboldtian idea of the university laid the foundation for the university to play an important role in building civil society, in building the culture of a nation.

But according to Readings (1996:3, 22), the university has now become “a transnational bureaucratic corporation where students are the customers and excellence has become the unifying principle”. This leads him to conclude that the idea of the university as an institution

that helps students “gain an understanding of active engagement in culture and society and shapes the political consciousness of students” (McLean, 2008:63), is no longer relevant.

Our third point of reference is provided by Giroux and Searls-Giroux (2004), in their book *Take back higher education*. They make the point that the media is taking over the “schooling of the public mind”. The challenge is to understand that with a very powerful media that has its own agenda of influencing the public, it has an impact on universities.

Giroux and Searls-Giroux (2004:7) argue that this is all the more reason to ensure that there are “formal spheres of learning”, where these formal sites can provide citizens with “the kinds of critical capacities, modes of literacies, knowledge and skills that enable them to both read the world critically, and participate in shaping and governing it”, with the university being one of these spheres (Pieterse, 2010:12-13).

In the fourth place, Barnett (2004) writes about *Reclaiming universities from a runaway world*. The forces at play in the world – globalisation, neo-capitalism – now that we don’t have the stability provided by the bipolarity of the Cold War balance between the US and USSR any more, creates a runaway world in which universities are struggling. “However, the title does not only refer to a loss, but also to a hope that the idea and practices of universities can be reclaimed” (Pieterse, 2010:13). We have to reclaim universities for a world that can stabilise around knowledge, around the products of knowledge.

Then there is fifthly, Divala (2008:194, 198-199), who worries that “globalisation and neo-liberalism push universities to a position where they are more relevant to global demands than local needs, where this is especially true for the developing world and its universities.”

He makes the argument that universities are beginning to go beyond the ideal of being “world class” to think of themselves as “global players”. As they think globally, they miss the local responsibilities they have. They become more relevant to global demands. We drive big world issues while the small local issues are no longer important.

At Stellenbosch we have tried to address both the local and the global. In my first term, 2007-2012, we spoke a lot about taking our immediate environment – the broader Stellenbosch area – as our first laboratory as natural and social scientists, our living laboratory. As you tackle the real-world problems of, e.g. shack dwellers in Kayamandi township, it also enriches your academic work, your research and your community interaction as an institution of higher learning. You have to do both – you have to keep your feet on the ground while you strengthen your big-world competencies.

In the sixth place, or Altbach and Knight (2007:304) universities in the 21<sup>st</sup> century are at a “crossroads where emerging programs and practices must ensure that international higher education benefits the public and not simply be a profit center”.

What does it mean for us? What does it mean for us going forward the next 10, 20, 50 years? It is not easy, it is not simple, we cannot continue along the same route of the 20<sup>th</sup> century.

Lastly, Gould (2004:453) makes a powerful point about the role of higher education. He says the “broadest and most vibrant context for the development of knowledge in higher education is its social mission to empower individuals and to serve the public good.” This ties in with the aforementioned notion of Castells of the university as “engine of development” in the “information society” and its accompanying “knowledge economy”.

The challenge for us as university leaders is to determine how best to harness this “engine of development” to both “empower individuals” and “serve the public good”?

#### **4. Hope in Africa – Shaping Stellenbosch University’s Vision 2030**

At Stellenbosch University’s most recent twice-yearly Institutional Planning Forum (on 27 July 2012), we looked at two futures – the world and Africa by 2030, and the Stellenbosch region by 2030. In the context of growth in our area, we also have to think of the growth of our university. Can we grow? If we grow, how and where do we do it?

We have also been engaging across the university with the National Development Plan of South Africa, which is the National Planning Commission’s vision for our country by 2030. Together, this has given us a multi-layered picture of where we are, where need to go, and what we need to do to get there.

We must ask ourselves the serious and difficult questions of how this complexity of the intersection of local, regional, national, continental and international or global issues should be understood.

The strategic plan that took on shape at Stellenbosch since 2007 is an example of an attempt to bring the differing characterisations of higher education into a cohesive and complementary whole. We call it the HOPE Project<sup>2</sup> – a reflection on Freire’s<sup>3</sup> notion of a “pedagogy of hope”. The pragmatic conception is key here, but it is achieved by educating individuals to lead change and serve development and by producing research that is not only excellent but also relevant.

Through a wide range of academic and cross-cutting initiatives the HOPE Project pursues sustainable solutions to some of South Africa’s and Africa’s most pressing challenges. The initiatives follow a science-for-society approach, and are grouped into five themes derived from the UN’s Millennium Development Goals (MDGs):

- (i) Eradicating poverty and related condition;
- (ii) Contributing to human dignity and health;
- (iii) Consolidating democracy and human rights;
- (iv) Promoting peace and security; and
- (v) Balancing a sustainable environment with a competitive industry.

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<sup>2</sup> See [www.thehopeproject.co.za](http://www.thehopeproject.co.za)

<sup>3</sup> Paulo Freire, *Pedagogy of the oppressed* (London: Penguin, 1996 [1970]); and Paulo Freire, *Pedagogy of hope: reliving Pedagogy of the oppressed* (London: Continuum, 2004 [1992]).

These themes are pursued in each of the University's three core functions of learning and teaching, research and community interaction<sup>4</sup>. And the motivation for doing this can be found in how we see the role of the university – that it should be a centre of hope by addressing the needs of society and in that way help to change the world<sup>5</sup>.

Stellenbosch University – in a policy document adopted by its Senate and Council, *Hope as guiding concept for Stellenbosch University*<sup>6</sup> – states that it “is committed to creating hope in and from Africa by means of excellent scholarly practice.” This idea is expanded upon as follows:

*The University endeavours to create the conditions that will ignite the imagination of scientists to solve problems in creative ways through basic and applied research and through multi-, inter- and transdisciplinary academic activities. The three core academic functions of the University, namely scientific research, learning and teaching and expertise-based community interaction are integrated and used in the service of both the private and the public good.*

Our thinking is informed by an analysis that a university is not just there for itself and its immediate community. A university is a national asset, *and* a regional asset, *and* a continental asset *and* a world asset. It is in this context that the need to integrate the core functions of a university – and the strategy of pursuing meaningful collaboration with others through building international knowledge coalitions – should be seen.

What we want to do en route to the future, the next 20 years or so, is to make hope happen. We think it is possible, and we think this university not only has a responsibility to empower individuals and to have an impact on the public mind, but also to—in our case – deliver on the five themes of the HOPE Project, as we go forward.

These themes all have universal appeal, but let me focus on one of them that is often uppermost in our minds – promoting sustainability.

## **5. Higher education for sustainable development**

Coinciding with the recent UN Conference on Sustainable Development in Rio de Janeiro (20-22 June 2012), the Higher Education Sustainability Initiative called on leaders of the international academic community to commit to the development of sustainable practices for higher education institutions.

The Initiative's declaration starts from the premise that higher education institutions have a “responsibility in the international pursuit of sustainable development.”

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<sup>4</sup> See H.R. Botman, “The case for the relevant university,” *South African Journal of Higher Education* 25 no. 1 (2011): 14–21

<sup>5</sup> See <http://www.sun.ac.za/university/Management/rektor/docs/russel%20installation%20speech.pdf>

<sup>6</sup> <http://www.sun.ac.za/NEWS/dokumente/algemeen/Hoopmotief.pdf>

This is fleshed out as follows:

*Since Higher Education Institutions educate and train decision makers, they play a key role in building more sustainable societies and creating new paradigms. As educational institutions, they have the mission to promote development through both research and teaching, disseminating new knowledge and insight to their students and building their capabilities. Higher Education Institutions have a special responsibility to provide leadership on education for sustainable development.*

The declaration then calls on higher education institutions to take the following actions:

- (i) Teach sustainable development concepts, ensuring that they form a part of the core curriculum across all disciplines.
- (ii) Encourage research on sustainable development issues, to improve scientific understanding through exchanges of scientific and technological knowledge.
- (iii) Green their campuses by reducing their environmental footprint; adopting sustainable procurement practices; providing sustainable mobility options for students and faculty; adopting effective programmes for waste minimization, recycling and reuse; and encouraging more sustainable lifestyles; and
- (iv) Support sustainability efforts in the communities in which they reside.

Lastly, signatories to the declaration undertake to “[e]ngage with and share results through international frameworks, such as the UN Decade of Education for Sustainable Development, led by UNESCO, the UN University system, the UN Academic Impact, the Global Compact, the UN-supported Principles for Responsible Management Education initiative and the UN Environment Programme’s Environmental Education and Training initiatives, in order to exchange knowledge and experiences and to report regularly on progress and challenges.”

These are steps that all higher education institutions everywhere should consider if we are serious about building a sustainable global community.

## **6. Greening Stellenbosch University**

Let me provide some examples of how we are responding to the challenges of promoting sustainability and making SU’s campuses greener.

### **6.1 A new era – facilities and mobility for a 21<sup>st</sup>-century university**

SU has experienced unprecedented growth of late. Since the turn of the century, our student numbers have shot up from 20 000 to 28 000. That has put enormous pressure on our facilities, which are already overflowing.

Over a number of years, we have been developing strategies of making SU more sustainable. This has resulted in our Campus Master Plan for Facilities and Mobility, which can be regarded as two sides of the same coin.

### **6.1.1 Facilities**

Universities, being an integral part of many urban landscapes around the world, and often being mini-cities themselves, are a laboratory for what can be achieved with the right policies and choices. Universities have an opportunity to be leading lights, showing the way to creating 21<sup>st</sup>-century urban spaces.

Being situated in the heart of Stellenbosch, we consider meeting the challenge of developing sustainable infrastructure and pioneering green choices a priority. Our new Facilities Management building illustrates just how universities can do this. This three-storey, 1 412m<sup>2</sup> building was designed and built for sustainability and energy saving.

A thorough shadow-analysis was done to keep the heat-load to a minimum, yet let enough light into the building. The large eaves also help keep the building cool in summer and warm during winter. Wood panels on the outside of the building to eliminate as much as 50% of the heat-load.

Another innovative aspect of the building is its air-conditioning – cold water is extracted from the Eerste River and used in the air-conditioning system and then pumped back to the adjacent sports fields as irrigation water.

Energy-saving lighting has been fitting throughout the building. As more natural light is available in the building, the lights dim automatically in order to save electricity. With all the energy-saving elements of the building, it boasts a 35% reduction according to the energy efficiency index, known as the SANS 204. This amounts to an annual saving of at least R128 000.

For older buildings changes are being made as well, with the installation of energy meters and wireless modems to measure energy consumption in the various buildings across campus, the introduction of energy audits, replacing shower nozzles, installing solar heating systems and improving waste management amongst the many changes.

### **6.1.2 Mobility**

More sustainable facilities is just the latest in a long line of green choices SU has made. Earlier this year, we launched several mobility innovations. We were as much motivated by principle as by necessity.

Neither the university, nor the town can handle the increase in motor vehicles in Stellenbosch. Our figures show that 82% of staff members and 43% of students use their own cars. If each of them have to get a dedicated parking space, we would have a shortage of 7 200 bays. We have neither the space nor the money to do this. In any case, the more



vehicles, the larger our carbon footprint, which is what we want to avoid, for the sake of Planet Earth.

I will highlight two measures that we have taken to reduce motor vehicle traffic on campus and in the rest of Stellenbosch. The first is a shuttle service on campus, called MATIE BUS. Motorists who drive to our main campus are encouraged to park at dedicated sites on the outskirts, where they can board a shuttle to the centre.

We have also launched the MATIE BIKE cycling project, making a total of 400 re-purposed commuter bikes from the Netherlands available to students and staff members. It is taking some time to restore a cycling culture to campus, but already nearly half of these cycles have been rented. One student tweeted: “MATIE BIKES are ridiculously cool! I want one!”

## **7. Virtual higher education**

Speaking of a culture change, another opportunity looming large for all of us is that new ways of learning and teaching are emerging with the growth of information technologies. Virtual Learning spaces are extending the reach and richness of higher education opportunities.

In 2011, 160 000 people signed up for a free, non-accredited, online course in artificial intelligence offered by Peter Norvig of Stanford University. Since then, there has been an explosion of so called Massive Open Online Courses, also known as MOOCs. It entails the offering of high quality courses from top universities – for free to everyone with an internet connection.

Stanford and its partners –including Princeton University; the University of California, Berkeley; the University of Michigan-Ann Arbor; and the University of Pennsylvania – have formed Coursera. Similar initiatives include edX, a joint venture initiated by the Massachusetts Institute of Technology (MIT) and Harvard University, and Udacity, a private venture with the stated goal of “democratising education”.

The Khan Academy, also a player in this field, states on its website”: “[W]e’re on a mission to help you learn what you want, when you want, at your own pace.” Harvard President Drew Faust says: “edX will enhance the traditional residential model of undergraduate education on both campuses by supporting an unlimited number of experimental online approaches to teaching that can be used by Harvard and MIT faculty to benefit their students.”

It is clear that MOOCs are fast changing the face of higher education globally, and therefore has become a phenomenon demands our urgent attention. There is now greater pressure on universities to be distinctive and innovative, and to make a critical contribution to economic and social progress – in new, technologically mediated ways.

Van der Merwe (2012) points out that the phenomenon it entails certain key shifts: From the idea that “content is king” to regarding content as a free good; from seeing the lecturer as the

protector of an intellectual offering, to offering students the ability to interact with knowledge; from large university lecture theatres to one-to-one tuition and peer interaction.

Universities everywhere will have to decide whether and to what extent they are going to be part of this revolution. There will be risks, but also opportunities. We need to figure out what these are by engaging with the phenomenon of virtual higher education.

Points for further discussion include the following (Van der Merwe, 2012):

- (i) What are the core competencies of residential, research-based universities?
- (ii) What are the opportunities and experiences offered by the campus environment that cannot be replicated online?
- (iii) How can we use virtual modes to improve, not replace, the campus experience?
- (iv) What type of institutional support is needed for these ventures to succeed?
- (v) What type of technological infrastructure is needed?

## **8. Making hope happen: Positioning universities in the 21st century**

I started off by holding up the challenge posed by Gould (2004:453) – that higher education has a “social mission to empower individuals and to serve the public good.” This I connected to Castells’ notion of the university as “engine of development”. And I gave an overview of how Freire’s critical pedagogy inspired us at Stellenbosch to work towards being a centre of hope by addressing the needs of society and in that way help to change the world<sup>7</sup>.

At this point in time, universities worldwide are at a great historical moment. Facing challenges of sustainability, economic uncertainty and socio-political upheaval, we have the opportunity to democratise education and extending its reach by harnessing new technologies. Whatever we do, we should never lose sight of the fact that human development is the moral imperative of our time.

Heraclitus, around 500 BC, is reported to have said:

*...you cannot step twice into the same river, for other waters are continually flowing on....everything flows and nothing abides; everything gives way and nothing stays fixed ... Cool things become warm, the warm grows cool; the moist dries, the parched becomes moist. ... It is in changing that things find repose.*

This is the logic of transformation that we have to abide by.

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<sup>7</sup> See <http://www.sun.ac.za/university/Management/rektor/docs/russel%20installation%20speech.pdf>

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