

The Imprint of Education

The Imprint of Education (TIE) is a project of the Human Sciences Research Council (HSRC), South Africa, in partnership with the Mastercard Foundation that is exploring the post-graduation trajectories of Mastercard Foundation Scholars Program alumni. TIE is investigating topics such as ethical and transformative leadership, give back, employment and entrepreneurship, student support and mentoring. It consists of five sub-projects or learning activities. The TIE project principal investigators are Prof Sharlene Swartz, Dr Alude Mahali and Dr Andrea Juan.



Reimagining the African University – Conversation Series

Learning Activity Four consists of a series of conversations with experienced scholars and thought leaders on the future of higher education in Africa. In Reimagining the African University, they discuss challenges, best practices, and the potential for innovation to initiate further dialogue. This transcript is part of a series of interviews conducted in 2021 and may be used with appropriate attribution for scholarly purposes. The learning activity is coordinated by Prof Thierry Luescher, under the intellectual leadership of Prof Crain Soudien.

Interview with EARTH University

Interview conducted by Profs Catherine Odora Hoppers and Crain Soudien on 12 August 2021

Catherine Odora Hoppers: Can you introduce yourselves?

Arturo Condo: I have been the President of EARTH University¹ since 2017. Previously, in my academic and business career the focus has been on development, including, for example, on how food systems can support development.

Yanine Chan: I have been at EARTH for 26 years., first as a professor in food science and subsequently as a dean, which is my current position. My field is food science entomology.

Emily Kaiser: I have been with EARTH for more than four years supporting Arturo Condo in his role as president of the university. I have worked closely on a longstanding partnership between the university and RUFORUM (www.ruforum.org), as well as on a new fellowship programme supported by Mastercard Foundation which seeks to support graduates as they transition from university into careers.

Amy Porter: I have been at EARTH for about 11 years. I am in charge of the internship programme at the university and also run the scholar's programme for the Mastercard Foundation.

Catherine Odora Hoppers: Professor Condo, could you please describe your relationship with the higher education sector in general and EARTH University in particular?

¹ EARTH is a private, non-profit, international university in Costa Rica which places great emphasis on sustainable development and which offers a four-year undergraduate agricultural sciences qualification.

Condo: I come from business academia and have connected with higher education in a number of roles, including as a student, a researcher, a professor and an administrator. I previously led the INCAE Business School, which has campuses in Costa Rica and Nicaragua, and participated in a number of accreditation systems, including the AACSB peer-review process, from which I learnt much. Comparing EARTH and INCAE, I would say that notwithstanding their different areas of focus in terms of the kind of the professionals that they seek to train, both are ultimately concerned with producing leaders. A former head of the United States (US) Military Academy at West Point once said that the aim of the training there was not to produce soldiers and military officers but leaders of society, people who would be leaders all their lives even after their military service had come to an end. Similarly, the aim at EARTH is not merely to train students to be agricultural managers, but to prepare them to be lifelong, enlightened leaders.

Odora Hoppers: From your experience with EARTH, what would be your vision for higher education in Africa?

Condo: There is a common belief in Latin America, Africa and Asia that students should go and get educated in the US or Europe and then simply return to their home countries and implement what they learnt there. For example, Costa Rican colleagues have promoted the view that the best approach is to copy Harvard Business School's MBA. But I think that's wrong. Each institution must have its own design – its own programme content, its own admission policies, etc.

So, for example, at EARTH about half of the agricultural engineering degree programme is not directly concerned with agriculture, but rather with producing leaders for the tropical regions in Latin America and elsewhere. Universities have a particular responsibility to produce leaders. In Africa, less than 20% of the population holds a university degree and only a miniscule minority hold a degree from an international university. So, merely training these graduates to be, for example, software engineers, represents a massive waste of resources. They should be leaders as well as software engineers, so that they can lead the digital revolution in healthcare and agriculture and other sectors on the continent. The aim should be to produce the leaders who Africa needs.

Chan: Unlike many other so-called “international” universities, where the vast majority, perhaps 90%, of the cohort, comes from the host country, EARTH is actually international in its orientation, educating students from 36 countries around the world and with only 20% of its students hailing from Costa Rica. In this context, the process of preparing leaders from across the world – from Costa Rica, Ghana, Uganda, Ecuador or Europe – must entail understanding the students' identities and seeking to realise their potential on that basis. So, EARTH University's approach, which historically has been to focus on values and raise social and environmental awareness, should not come at the expense of the student's individuality and their cultural and educational background. There is no recipe that everybody has to follow.

Kaiser: In its relationship with African higher education, EARTH is seeking to share what it has learned over the course of its 30-year history, but also to learn together with African institutions, with the goal of making agricultural education more effective. In its collaboration with RUFORUM, EARTH has been asked to: focus on increasing the capacity of the member African universities to

promote the development of young leaders who can lead change on the continent; support the shift toward more experiential learning in which students engage as directly as possible with rural communities; and strengthen entrepreneurship as an element of agricultural curricula with the aim of producing livelihoods and sustainable change in the agricultural sector.

Porter: One approach could be to establish an EARTH University in Africa in an effort to bring its model of experiential learning to the continent, although, of course, this would need to be tweaked to address the various realities experienced by African countries. The EARTH model is also valuable as an example of higher education that equips students not only with technical skills but also the capacity for leadership so that they can become agents of change in their societies.

Odora Hoppers: It seems that a key aspect of EARTH University as an institution is its drive to create the space to learn.

Condo: As a learning institution, EARTH is a place in which both professors and students learn, which runs counter to the dominant notion among higher education institutions around the world that learning is a one-way process, with academics teaching students. In this regard, EARTH's model not only promotes experiential learning, it also promotes experimental learning, which is not the same. Experiential learning is a process through which the student is inducted in a set understanding prescribed by the teacher, who is ascribed a position of already knowing what the student needs to learn. However, under the experimental mode both the students and the professors learn by, literally, experimenting. The adoption of this approach, which is counter-cultural to that promoted at many universities, requires the establishment of staff recruitment, evaluation and incentive policies that can foster more engaged teaching and learning, and research. In other words, different qualities would be prioritised among the faculty.

Chan: The kind of leadership taught at EARTH University emerges from its teamwork methodology. Students from different countries work in teams for four years, including three years working on entrepreneurial projects that they have chosen. In order to undertake the work effectively, the students have to learn about each other; they have to communicate across languages and cultures. In this way, the students learn from each other's cultural and educational differences and similarities, and teach each other, as well as the teacher-practitioners who are engaged in their projects.

Crain Soudien: Dr Condo, what do you think of the state of higher education in the world today?

Condo: There are many functions that are undertaken well. For example, the deployment of innovation as an aspect of higher education's social role, as was seen with the creation of vaccines for Covid-19. In general, there have been remarkable, valuable advances in medicine and in physics in which academia has played a role over the past two centuries.

However, higher education is not fulfilling its social role in relation to preparing leaders, which is particularly true in the Global South, although also in the US and Europe. If universities only see their role as preparing engineers and doctors and biologists, they are failing society. In this regard, the most serious obstacle to change is the governance of universities. For example, institutional autonomy and the freedom of academics to teach what they think is right are taken

as a mantra in Latin American higher education. However, the reality is that universities are funded by society, whether in the form of tuition fees, government budgetary support or philanthropy, and so have an obligation to meet society's needs and engage with society on this basis to identify those needs more clearly. This is not to say that individual academics and higher education institutions should not be free to innovate in their own ways, but rather that universities have a duty to design their offerings and their processes so that they prepare the human talent, leadership capital and knowledge that the world needs. However, the tenure system for academics can impede universities' efforts to become more responsive and accountable to their societies and more purposeful in how they deploy their freedom to conduct research.

The theory of change for universities must also look beyond how they may transform themselves as individual institutions. In this context, EARTH University is a member of the University Global Coalition (UGC) which was established to foster collaboration among universities worldwide in support of the Sustainable Development Goals (SDGs) adopted by the United Nations (UN) in 2015. In contributing to this collaboration, Earth University promotes the view that there is a need to harness the input of the multitude of students around the world to address the systemic challenges that need to be solved to achieve the SDGs. In particular, EARTH University is working with McGill University in Canada; Newcastle University in the United Kingdom (UK); Stellenbosch University in South Africa; and the University of California, Davis, in the US, in producing research in pursuit of SDG 2 which aims to achieve "zero hunger".

In summary, the purpose of universities needs to be society-centred, not university-centred or professor-centred, which will require a massive cultural shift for higher education.

Soudien: So, how have you persuaded your colleagues and your peers in other institutions of the virtues of this approach?

Condo: Despite being overworked in response to the Covid-19 pandemic, the faculty and staff at EARTH University have understood and supported the importance of the institution's engagement in the UGC. However, individual academics may ask themselves how they can protect their own interests, including their need to publish, as part of this engagement. There is also the issue of how the UGC engagement should translate into practice across the institution – for example, in terms of applying for research grants.

Soudien: So, how possible is it to transform institutional purpose in support of such engagement – particularly given the resilience of established institutions and their capacity to assimilate new approaches so that they lose impetus and the status quo is maintained?

Condo: This is a clear challenge, which is why, beyond the problem of institutional culture, appropriate governance is required to entrench fundamental change. In this respect, achieving sustainable change, which depends on recruiting a critical mass of people to the cause, is a slow process – particularly at universities which are such old institutions in terms of their founding principles.

Porter: Responding to EARTH University's efforts to establish the five-university group in pursuit of SDG 2, some of the institutions, such as Stellenbosch University, have been quite receptive – for example, by coordinating in relation to an internship programme. Others have been more reticent, seeking to identify how they may benefit from the collaboration before pursuing further engagement.

Condo: The collaborative model is a natural fit for EARTH University, although it has introduced some new elements for the other universities in the group. For example, there was an event connecting student-farm initiatives across the universities. Such farms are an integral aspect of EARTH University's work, but something of an outlier for the other universities where most initiatives are not run by students. Nevertheless, it fostered greater student collaboration across the universities and promoted the importance of the idea of such collaboration. More broadly, the cooperation among the universities may be viewed as promoting the idea that greater impacts may be achieved by even closer collaboration, which is a key aspect of EARTH University's mission.

Odora Hoppers: Unless the structures, the ethos and the values of an institution are transformed, sustainable change cannot take place. Programmatic change alone is insufficient. In this context, is there a way in which the EARTH University model and its values may be deployed as a theory of change for other universities in their efforts to transform their institutional cultures and systems of governance?

Condo: Many large companies are currently struggling to reclaim their place in society because they are widely seen as capturing value rather than creating value for society. One potential transformative response to this is for corporations to revisit their actual purposes, rather than to engage in empty rhetoric around their so-called "missions". So, for example, Coca-Cola may ask itself whether its purpose is to sell carbonated drinks; or whether it is to contribute to nutrition. If it is the latter, then the company would need to revisit what it does.

Similarly, universities need to stop and ask themselves what they identify as their purpose. Is it to be the most academically successful – to produce the most papers and win the most prizes? Or is it something else? Whatever has been identified as the purpose won't change unless the institution's governance changes. In this regard, it is easier for new institutions which can design their aims from scratch to be bold in their approach. So, for example, the African Leadership University (ALU) is free to focus on the critical problems facing society as part of its purpose to create the leaders that the continent needs.

Meanwhile, the transformation of existing universities depends on the establishment of new systems of governance, which can only be instituted by taking bold steps. For example, the integration of Rwandan universities by the national government allowed for a restructuring of their governance. In this respect, marginal actions are likely to be ineffective, just as a blacksmith's hammer blows cannot shape metal unless it has already been heated to take on a new form. So, strong leadership from governments and, possibly, major philanthropic donors is required to foster sustainable change.

Difficult as it may be, such change is necessary, however, particularly given the threat posed to the present, traditional model for universities by the rise of internet learning which may take the form of paid-for or even free courses.

Odora Hoppers: How do you capture indigenous knowledge at EARTH University?

Condo: I am Ecuadorian and recently spent time with the Ecuadorian students on campus celebrating the country's independence. At EARTH, all the students are invited to bring their cultures, their dresses and their music; and many spaces are created on campus to enable them to share their identities. In addition, research undertaken at the university explores indigenous knowledge. For example, a recent project has investigated the ways in which species and varieties of plants from the Cacao region in south-eastern Costa Rica may be used.

Chan: The students and staff at EARTH comprise not just a multicultural but an intercultural group, and indigeneity is part of that. The raw material at a university is its mix of people who may be poor or upper class; who may come from different countries; and who may be indigenous or who may be refugees. In this regard, it is questionable whether the present systems of testing to assess whether someone should enter university are appropriate. For example, indigenous people, many of whom are poor, may not have attended the best or the right high schools, but that doesn't mean that they lack the required potential. In addition, the kinds of academic programme and forms of assessment promoted by universities can prioritise particular forms of learning over other kinds of knowledge, which can further disadvantage or even filter out students who have not had the benefit of high-standard secondary education – again prejudicing the prospects of indigenous people. Higher education should collaborate with the government and the rest of the education system to foster acknowledgement of the biases that are impeding opportunities for indigenous people and refugees and others who are denied equitable educational access; and should seek to address these at the systemic level and in the kinds of teaching that are taking place in the classroom.

There is also the issue of co-learning among groups and the importance of recognising the value of the different understandings and experiences that the various groups can contribute in terms of their cultural identities.

Condo: EARTH is coordinating with USAID to establish some indigenous-centred projects, including in Guatemala, with the goal of capturing and systematising indigenous peoples' knowledge, for example, in relation to agriculture. The aim is to work with people in indigenous regions and to learn with them how food systems in these areas may be developed using ancestral as well as other knowledge. At present, the proposed project posits a relationship between cultural analysis and markets, but the goal is also to incorporate a research component – which may be considered crucial given that there are pockets of knowledge which may be lost to humanity if they are not captured and systematised.

Soudien: In your work, how do you hold the balance between respect for the value of such ancestral knowledges and a clear-sighted understanding of the significant benefits that new technologies can bring?

Condo: At my inauguration as president at EARTH University in 2017, a Mozambican student presented a rich talk on hi-tech versus low-tech, which is a point of tension in the discourse on development. Many analysts have argued that, although high-technology solutions may offer benefits, their cost puts them out of reach for small farmers and that, accordingly, the support on offer should focus on enabling low-tech solutions. However, Esperanza argued that the high-tech, low-tech discourse presents a false dichotomy, and that both forms of technology should be deployed, often in tandem, depending on the actual context.

Chan: Students at the university are inducted in using both kinds of technology. For example, they can use a pen and paper or electronic equipment to assess required water flows for irrigation. Student must be able to deploy both kinds of methods so that they can work in a range of environments, from high-tech institutions to low-tech farming, and so that they have a holistic view of the kinds of agricultural challenges that are faced. For example, notwithstanding the valorisation of high-tech as the next big thing, there are still many regions around the world without electricity. The high-tech/low-tech approach also governs the kind of research conducted at the university, which is directed as solving practical problems rather being produced for publication in expensive academic journals targeting a select audience.

Condo: The work also seeks to debunk the notion that low-tech solutions are less sophisticated than high-tech ones. For example, biodegradable fences on a farm may be viewed as low-technology but they can actually offer the best solution not only in terms of saving money but also in relation to sustaining the ecosystem by helping regenerate the soil. So, the low-tech solution can actually be superior to the high-tech one.

Chan: There are also ways in which low-tech and high-tech mechanisms can work together to leverage benefits. For example, EARTH University has worked on developing hi-tech algorithms that can be deployed by farmers to spread the right amounts of fertiliser in the right places for the maximum effect.

Soudien: These binary distinctions – this is a European invention, that is an ancestral custom – can inhibit action and obstruct a more fluid understanding of the nature of knowledge and, accordingly, the development of new kinds of thinking and new approaches. In this regard, existing rigid categorisations of knowledge can be quite unhelpful. Instead of seeing particular knowledges as a gift from some to others, the knowledges of the world should be viewed as a common inheritance, which is what they are.

Odora Hoppers: Dr Condo, is there anything else that you would like to discuss?

Condo: I think that in the wake of the pandemic the issue of how large funders such as the World Bank may influence development trajectories has become a more democratic discussion in which all parties, including those who are funded, have a say.

Another major impact has been the way in which the use of the new technologies has been accelerated as a result of the pandemic, which presents great opportunities and challenges and the potential for significant disruption. Many universities have struggled with issues of cost and access, with only a fraction of the youth graduating from high school and an even smaller fraction

going to university; and the private and university sectors have seemed to be unable to serve the vast majority of the population in any meaningful way. In this context, the potential for aggregation produced by the economies of scale in the virtual world, which have been evidenced by the success of Facebook and Google, offer the possibility of knowledge being made much more widely available in an affordable way.

For EARTH University, the challenge then has been how it may best deploy online technology to disseminate the experiential and experimental forms of learning which are its speciality. At the university, less than a quarter of the students' time is spent in the classroom. The vast majority is spent in labs in fields. So, when the university went virtual during the pandemic, it was traumatic. However, the university found ways of using virtual technology as an enabler in its learning processes and, as a result, has started to develop a new practice of "e-learning by doing". EARTH University is now considering how it may deploy this new practice to engage thousands of young people outside the institution, including at vocational schools. The idea is not necessarily to equip them with a diploma, but rather to foster a practice of change-making and thus greatly expand the pool of those who will be changing the world.

In this regard, the Mastercard Foundation, which is uniquely placed as an external funder with ambitious goals to support youth employment, may consider helping to develop a new "Google for learning" which, at a marginal cost, could foster a young generation equipped and prepared to address the needs of their own communities and societies. Experience has shown that efforts that disrupt the present system are more likely to be effective than the adoption of linear approaches. For example, notwithstanding the admirable nature of the Mastercard Foundation's goal to create 30 million jobs by 2030 under its Young Africa Works programme, the larger reality is that the continent has lost about 30 million informal and formal jobs in the past 18 months. So, new kinds of action are required.

Chan: The Covid-19 pandemic has accelerated the use of real-time communication via the internet, which has presented a number of new opportunities for education. One such opportunity is that there is now the possibility of connecting with high schools to offer a new form of "e-learning by doing" in which the pupils interact with their environments rather than just sitting in front of a screen. As part of this, pupils would identify local needs and develop projects to address them in their own places. Unlike the traditional e-learning model, which mainly comprises reading educational materials that have been made virtually available and then undertaking online tests, this approach invites pupils to consider the places in which they live and learn about how they may change these in some way – with the results of this process then being shared with others via the online e-learning system. By promoting and implementing such "e-learning by doing" across the secondary education system, EARTH University aims to leverage the benefits of its particular educational approach.