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The crosscutting impact of higher education on the Sustainable Development Goals

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ABSTRACT

The Sustainable Development Goals (SDGs) include access to higher education as a valued outcome, but universities also have a crucial role in supporting societies in achieving the full set of 17 goals. This task can be achieved through universities' diverse functions of education, research, innovation and public engagement, as well as through their own campuses and communities. Nevertheless, despite their huge potential in this regard, current configurations of political economy present significant constraints. Seven of these barriers are analysed here: resources, recognition, marketisation, status competition, labour market links, difficulties of measurement and lack of imagination. These barriers are not insurmountable, and reimagined forms of higher education can play a major role not only in achieving the SDGs, but also in reinventing them for the post-2030 era.

1. Introduction

The broadening of focus from primary education to all levels in the transition from the Millennium Development Goals (MDGs) to the Sustainable Development Goals (SDGs) has been a welcome development. While the goal for tertiary education and university (SDG 4.3) is insufficiently concrete and demanding on states – stipulating 'equal access' (rather than universal access), and being monitored by the very broad 'Participation rate of youth and adults in formal and non-formal education and training' – there is at least acknowledgement of the importance of this level. Nevertheless, this is only one of the ways in which higher education is implicated in the SDG framework. As explored in McCowan (2019) we can see a further two forms of involvement: one in which higher education appears as part of the whole learning trajectory as a means of fostering the value sets and competencies needed for sustainable development – gender equality, human rights, global citizenship, appreciation of cultural diversity, peace and non-violence (SDG4.7); and another in which higher education acts as a driver for the full set of SDGs, not only through its educational role, but also through research, public service and other functions.

This contribution to the special issue will focus on the third of these roles. The centrality of higher education institutions to so many aspects of societal development makes its absence from earlier frameworks somewhat mystifying. For example, primary healthcare, education and other basic services targeted by the MDGs are impossible without the relevant professionals to staff them, and in most contexts this professional training takes place within higher education. Research and innovation emerging from universities are crucial to both improvements in these public services and also to solving the critical environmental and social challenges facing humanity. There is also extensive empirical research on the positive influence of higher education on political participation, civic values and peace building (the focus of SDG16) (e.g. Bynner et al., 2003; McMahon, 2009).

The section that follows will outline some considerations on the diverse ways in which higher education can play this crosscutting role in supporting the SDGs. It is important to generate a clear picture of the interconnections and pathways to impact so as to be able to understand, plan and evaluate the potential and effectiveness of institutions in this regard. However, higher education does not act in a political, economic and cultural vacuum, and the realisation of this potential in practice is dependent on the conditions present in our societies . The discussion will, therefore, move on to reflect on seven challenges that need to be confronted in order to maximise the potential of universities in this regard: resources, recognition, marketisation, status competition, labour market links, difficulties of measurement and lack of imagination. These barriers undermine both the achievement of the goal of access to higher education contained in the SDGs, and universities' ability to fulfil their potential role as a driver for the full set of goals.

2. How does higher education impact the SDGs?

The work of universities is commonly divided into three areas:

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teaching, research and what is variously known as public service, community engagement or extension. This third sphere is often a catch-all term for a range of activities of different types, some of which are education and research related (but involving communities external to the university), some of which involve services provided, and others public debate. Finally, universities have a range of operational activities that support all of the above functions, through their infrastructure, residences, energy usage, procurement and so forth.

All of these functions have significant implications for sustainable development. As is captured in SDG 4.7, the educational function of universities is fundamental for instilling values of equality, respect for human rights, diversity and cherishing of the natural environment. It also serves a more specific purpose of developing professional competencies, which can be imbued with sustainability principles – for example, civil engineers equipped to use renewable energy sources and involve local communities in decision-making. Research and innovation serve both to identify and assess the environmental and social challenges facing humanity (take for example the crucial task of analysing the impact of greenhouse gas emissions on climate), and to develop solutions and technologies to address them. The services provided through higher education institutions (community projects, secondments, advice to governments etc.), and the contributions to public debate all have direct influence on the practices and attitudes of sustainability in society. Through their campus operations, higher education institutions (HEIs) also have direct impacts on the environment and have their own internal dynamics of equality, diversity and inclusion. None of the above impacts are inevitable, and historically universities have contributed in negative as well as positive ways, equipping their graduates to effectively accumulate capital at the expense of the natural environment and human communities.

There are various pathways through which these impacts are achieved. In some cases the influence may be direct. The extensive travel that accompanies international student mobility has an immediate effect on the accumulation of CO_2 in the atmosphere (according to Shields's (2019) study, equivalent to a country the size of Tunisia or Croatia). In other instances, the impact takes place via shifts in societal attitudes – for example in the gradual raising of awareness of the role of greenhouse gases in climate change from the 1980s – or adoption of new technologies such as electric cars. In many cases these broader impacts on society are channelled through 'bridging actors', individuals and communities that have close contact with universities, most important of which are students themselves who then go out and live and work once they have graduated (McCowan, 2020).

Given the diversity of pathways through which HEIs can have impact on sustainable development, there are naturally differences of timescale involved. The impact of a project to build a series of new wells in a water-scarce area may be immediate, but the effects of university study on professional life of a graduate may take place over the course of a lifetime, and the practical implications of a scientific discovery may only emerge after a century. In addition to timescale, there are also differences of intensity and reach, with influences varying in terms of their strength and the scale at which the impact takes place.

The potential of universities is, therefore, extraordinary. The diversity of roles that it can play, the depth of the potential transformations (in changing individuals' understandings and attitudes, in building and applying humanity's store of knowledge and generating new technologies) and its broad reach (more than 40 % of young people go on to some form of higher education (UNESCO Institute for Statistics, 2023a), mean that the ambitious role to underpin all 17 SDGs is not unwarranted. In order to do that, of course, it needs to be oriented towards the areas contained in the SDGs and committed to the values underpinning them, and as mentioned above, historically this has not always been the case. Fortunately, in the years since the agreement of the 2030 agenda, institutions had been highly active in taking up the framework, and mapping, aligning and evaluating their activities in relation to them. Nevertheless, there remain a series of barriers and challenges constraining these efforts, seven of which will be outlined in the section that follows.

3. Seven challenges

3.1. Resources

While an obvious point, any analysis of barriers to the achievement of the SDGs must acknowledge the need for adequate resourcing (financial and in other forms). There is extreme disparity of funding for higher education around the world, not only between countries but also within them. According to UNESCO Institute for Statistics (2023b) figures, annual government funding per student varies from under $1000 (Bangladesh) to over $40,000 (Luxembourg). The potential of higher education for achieving the SDGs can only be realised if there is adequate infrastructure (physical and virtual), remuneration for academic and administrative staff, and specialist equipment required for different disciplinary areas of teaching and research.

This is not to say that higher education of quality necessarily has to resemble the lavish model present currently in certain contexts – with the USA in particular witnessing an escalation of expenditure and revenue generation through tuition fees for privileged students that would be impossible to universalise nationally, let alone globally (Blumenstyk, 2014; Goldrick-Rab, 2016). Much of this expenditure is not essential for high quality teaching and learning experience, but instead is used to entice students (and other 'customers') in the context of intense market competition. There are examples of more frugal, but nevertheless rich and vibrant, forms of higher education (see examples from the members of the Ecoversities Alliance[1]) – and there will need to be if we are to find a model that can serve the whole of the world's population.

3.2. Recognition

Yet global inequalities in higher education are not only those of resources, and in fact are not even confined to the realm of the objective. As important as concrete differences between institutions are the disparities in prestige and public recognition. These disparities are significant in themselves, but also have a knock-on impact on the life chances of those who pass through them, determining to a large extent the exchange value of diplomas in the labour market, and also influencing the uptake of research, scholarship and other forms of output.

Ensuring public recognition of diverse forms of knowledge and institutional type between and within countries is a question of epistemic justice, but is also instrumentally valuable in achieving the SDGs on account of the importance of diversity of perspectives and an ecology of knowledges (Binagwaho et al., 2022). This point is even relevant for different disciplines, with certain areas – in particular arts and humanities – suffering not only financial cuts but also a loss of value in public eyes in certain contexts. All areas have important contributions to make to sustainability. Prestige is of course extremely hard to influence directly, but HEIs can make choices to provide support to areas of positive impact on the SDGs even when they fly in the face of perceived hierarchies and consumer demand.

3.3. Marketisation

Higher education systems around the world in recent years have been characterised by the introduction of forms of market, most obviously in the allocation of places for students, but also in areas of research, community engagement and estates (Brown and Carasso, 2013; Carpentier, 2012; Komljenovic and Robertson, 2016). Marketisation has in some cases taken the form of full markets, with variable pricing and suppliers aiming to maximise profits through driving down

[1] https://ecoversities.org/

costs – as is the case in the for-profit sector of Brazilian higher education, for example (Carvalho, 2017). But in others it has manifested itself in more subtle ways, serving as a mechanism of allocation of places in non-profit institutions (e.g. in the UK), and influencing assumptions about the value of a higher education degree in the relationship between institutions and their 'consumers'.

While many national governments have embraced marketisation both as a means of ensuring continuing expansion of the system without increased taxpayer support, and as a supposedly more efficient form of management, there are a range of negative impacts on sustainable development. Tuition fees, and particularly variable fees, can squeeze poorer students out of the system altogether or confine them to lower quality institutions, and thereby perpetuate or exacerbate existing socio-economic inequalities. Furthermore, across all of the functions of the university, marketisation compresses the space for public good (Unterhalter et al., 2018). Most of the SDGs cannot be achieved through individual consumption choices alone, and require forms of cooperation and collective action that can only be enabled by non-marketised higher education spaces.

3.4. Status competition

Marketisation places institutions in competition with one another, but higher education is characterised by a longer standing contest that goes beyond (while at the same time reinforcing) the financial disparities (Marginson, 2011). The status and prestige of universities is historically accrued, but in contemporary times is both gauged and created by international university rankings, most prominently the Times Higher Education, Shanghai and QS rankings. Institutions jostle for position, in many cases encouraged by their governments which view top-placed universities as national trophies.

Mainstream university rankings vary somewhat in their methodologies, but generally reward research excellence, gauged through publications in elite journals and citations, and through reputational surveys. Traditional markers of excellence can coalesce with some contributions to the SDGs, particularly as regards breakthroughs in basic science. Yet the rankings do not acknowledge the community engagement role of institutions, and tell us little about public benefit. Some alternative rankings have emerged in recent years – for example GreenMetric and the People and Planet University league – and mainstream ranking agencies have brought out their own sustainability measures (Times Higher Education impact ranking and QS sustainability ranking). Yet their influence, while growing, is still marginal.

3.5. Labour market links

One major barrier for higher education is the nature of its connection to the labour market. Higher education through its history has always been connected to work in some way, yet through the 20th century developed a particular significance, with its credentials becoming the primary mechanism for entry into white-collar employment. As stated above, this role has made higher education fundamental for the SDGs in providing the preparation needed for professionals in areas relevant to all 17 goals. However, this connection has led to more unfortunate dynamics. First, not all of the forms of employment available in society are beneficial to the SDGs, and universities are thus implicated in a range of socially and environmentally damaging activities. Second, since most employers are not able to undertake a full assessment of competencies in their recruitment processes, diplomas are used as a proxy, leading to an emphasis on certification over learning, and in the worst cases encouragement of diploma mills and even outright fraud. Third, HEIs have become so dependent on the through-flow of students into employment (particularly in the context of marketisation outlined above) that they have subordinated their other SDG-related aims to these ends.

3.6. Difficulties of measurement

In the context of strains on university resources and competing priorities, demonstrating the positive impact of sustainability-related work is essential to its survival. However, this is no straightforward task, given the complex interplay of direct and indirect impacts outlined in the previous section. Attribution of social and environmental changes directly to university activities is challenging on account of the interweaving of different influences (McCowan 2022). Even measuring the immediate outcomes of university activity can be hard. Greenhouse gases from university campuses can be gauged through scope 1, 2 and 3 emissions (fuel usage, electricity and upstream/downstream activities), as long as careful monitoring procedures are in place. Publications and citations can be measured, as can certain student learning outcomes. Some of the deeper impacts of the educational, research and community engagement functions of the university can be assessed through diverse forms of qualitative research. Yet the more diffuse and longer-term impacts are extremely difficult to gauge. It is not possible to accurately measure the impact of a social media campaign that has reached millions (and affects each of those people in different ways), nor a scientific breakthrough whose ramifications may continue to emerge many decades later, but both of these may nevertheless have transformative influences. The danger is that we dismiss those activities that have relevance for the SDGs but are not easily monitored and reported.

3.7. Lack of imagination

The final barrier is our collective lack of imagination about what the university could be. The 'university' which emerged in mediaeval Europe is only one of a range of historical instances of higher learning around the world, but on account of a confluence of factors has come to dominate (Carpentier, 2019; Perkin, 2007). Despite superficial differences in types of institution between and within higher education systems, there is a high level of homogenisation. While this model of higher learning has many positive qualities, it is not the only possible form, and the lack of diversity in this respect is actually prejudicial to the continuing vibrancy of the institution and its ability to achieve important social goals such as the SDGs. Fortunately, there are in fact some alternative models of institution that exist around the margins of mainstream systems (see examples in McCowan and Dietz, 2022). The decolonisation drives that have gained pace since the Rhodes Must Fall movement in South Africa have raised important questions about knowledge traditions, and efforts to ensure an ecology of knowledges must be continued alongside others to transform and reinvent the structures and practices of the institution. These reinvented universities may take a variety of forms – and it is important not to prescribe too tightly – but while abandoning the external trappings of conventional universities they must maintain a commitment both to direct impact in achieving the goals and the intellectual enquiry to critique and reinvent them.

4. Final reflection

The barriers above act in different ways to constrain, some acting to slow the vessel down (lack of resources and recognition), and others to throw it off course (marketisation, status competition, links to labour market, difficulties of measurement and lack of imagination). Universities need to have their own propulsion, they need to be free from blockages in their path, and to be able to pursue their route towards sustainability. Ensuring these conditions are in place is of course no easy matter, as the barriers outlined above are embedded in contemporary ideologies and structures of political economy, in historically accrued inequalities and strongly ingrained assumptions, beliefs and values. Nevertheless, there are spaces for change, particularly in relation to experimentation with new forms of higher education entailed by the final barrier relating to reimagining.

Now past the halfway mark in achieving the SDGs, universities have not been inactive in fulfilling the considerable task that has been laid at their gates. There has been a heartening uptake of interest in the SDGs amongst institutions, with various institutional alliances set up [e.g. University Leaders for a Sustainable Future, the Alliance for Sustainability Leadership in Education (EAUC) and the Sustainable Development Solutions Network], impacting activities in all aspects of university life. Much more can of course be done, and must be done as the urgency of the interlocking environmental and social crisis facing humanity mounts, and addressing the seven barriers outlined above will be essential to the needed transformation.

Yet, as argued in a previous work (McCowan, 2019), higher education has to work not only *for* but also *beyond* the SDGs. Internationally agreed frameworks can provide important impetus to action in the right direction, but need constant keeping to task, interrogation and reconceptualisation. In the case of the SDGs, particularly important is scrutiny of the underpinning conceptions of sustainable development (implicit as well as explicit), of the continuing faith with the illusion of economic growth and of marginalisation of indigenous knowledges (McCowan, 2023). Universities importantly have a constructive role, acting not only to achieve sustainable development, but also to question, deliberate and reformulate the very notion of sustainable development.

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