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## CHAPTER 4

# Greenlighting the University

## Re-envisioning the Role of Higher Education in Tackling the Climate Crisis through Action Research

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### Abstract

Higher Education (HE) must take a leading role in addressing the current climate crisis. Universities have the capacity to provide the critical research and training to enable us to respond to the multiple environmental, economic, social, and cultural challenges this crisis creates. In order for this to happen, however, researchers will need to go beyond the confines of the academy to engage with government, industry, and civil society as active partners. Action research provides a model for researchers to expand their roles to include community relationship-building, collaborative design, and advocacy. Fortunately, there are already spaces within

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and outside HE where this reinvention is taking place. This chapter explores how we might use action research as a model to create universities prepared to take their part in addressing the climate crisis and contribute to the well-being of human beings and the planet.

## Preamble

My academic training is in the field of Environmental Psychology, but beginning with my doctoral studies, the focus of my scholarship has been in the area of action research. I've worked in institutions of higher education (HE) for nearly 40 years, first at a small liberal arts college teaching primarily undergraduate students, then at a school providing professional training in human services, and then in two large research universities. I currently teach and advise doctoral students in the College of Education and Human Development at the University of Louisville, in Louisville, Kentucky in the United States of America (USA). I have also had the extraordinary opportunity to spend time collaborating with colleagues around the world, including most recently in Australia, South Africa, the United Kingdom, the Philippines, Denmark, and Sweden.

Several years ago, after completing work on the *SAGE Encyclopedia of action research* (Coghlan & Brydon-Miller, 2014), I took some time to reflect on where I wanted to put my energies going forward. I figured then that I had about 10 years left of active scholarship (somehow that deadline continues to be pushed back) and I decided that I needed to do whatever I could to address the (not looming but very current) climate crisis. Working at the local level first in Cincinnati, Ohio and now in Louisville, Kentucky, I have built partnerships in the local public school systems using classroom-based action research to facilitate student learning to promote climate awareness and activism. We have brought students to the university campus for a Day of Science, secured funding to rebuild greenhouses on the grounds of our partner school, and partnered with the school's culinary academy to provide

freshly grown fruits and vegetables. We have also established international partnerships with schools in Australia, Austria, the Philippines, and South Africa to enable our students to share their knowledge of climate change as a global concern with peers from around the world.

Many years ago, I wrote a chapter titled “The Terrifying Truth” (Brydon-Miller, 2004). The truth referred to in the title is that we are each responsible for taking whatever action we can in the attempt to bring about positive change in the world. This requirement aligns with Anne Inga Hilsen’s description of covenantal ethics as “the unconditional responsibility and the ethical demand to act in the best interest of our fellow human beings” (Hilsen, 2006, p. 27). Hilsen and I have since “added to this the responsibility to act in the best interests of the environment, acknowledging the interconnectedness of the human and non-human components of the biosphere” (Brydon-Miller & Hilsen, 2016, p. 101). In the context of the climate crisis, this responsibility necessitates both individual and collective action. HE institutions, with their vast resources of knowledge and technical expertise, are a vital source of potential innovation and action, but to date they have not had the kind of impact on policy and practice that is required.

In this chapter I present my ideas on the potential role that HE institutions might play in addressing the climate crisis, focusing on the ways in which action research might inform these shifts in practice. In particular, I explore the various roles and realms of action research and the ways in which centres of action research within universities might serve as spaces that model the kinds of processes that are required if we are to serve as active agents of change in addressing the climate crisis.

### **The scope of the climate crisis—and possible room for hope**

The most recent synthesis report from the Intergovernmental Panel on Climate Change (IPCC) (2023) makes clear the current and future impacts of climate change if action is not taken

immediately to address the problem. The stark analysis provided in this report reflects the strong degree of confidence researchers have in their findings.

Human-caused climate change is already affecting many weather and climate extremes in every region across the globe. This has led to widespread adverse impacts on food and water security, human health and on economies and society and related losses and damages to nature and people (high confidence). Vulnerable communities who have historically contributed the least to current climate change are disproportionately affected (high confidence). (p. 4)

But the report also offers hope that broad-based collaborative action can still help to mitigate the worst impacts of climate change, although it is clear that the longer we wait to take such actions, the more constrained our options become and the more severe the consequences. “Meaningful participation and inclusive planning, informed by cultural values, Indigenous Knowledge, local knowledge, and scientific knowledge can help address adaptation gaps and avoid maladaptation (high confidence)” (p. 67).

Clearly, HE institutions have an essential role to play in addressing the climate crisis. The data on which this report is based depend on the work of scientists trained and employed at research institutions. Educators and journalists trained in our colleges and universities are leading the effort to increase understanding of the causes and potential ways to address the climate crisis. And universities themselves have the opportunity through their own policies and practices to set an example of sustainability within their communities.

### **The climate crisis and sustainability in higher education**

One way in which HE institutions have begun to address issues around climate change is by establishing sector-wide standards for measuring efforts to increase sustainability. The Sustainability

Policy of the Association for the Advancement of Sustainability in Higher Education (AASHE) guidelines state:

We are committed to modelling sustainability across our operations and activities. AASHE defines sustainability in an inclusive way, encompassing human and ecological health, social justice, secure livelihoods and a better world for all generations. We operationalize this commitment through sustainable practices that address the organization's environmental, social and economic impacts. (p. 1)

In order to achieve these goals, AASHE has established the Sustainability Tracking Assessment and Rating System (STARS) to enable HE institutions to benchmark their progress toward addressing sustainability in the areas of academics, campus and community engagement, operations, planning and administration, and innovation and leadership. And I'm proud to report that the University of Louisville, through the work of its Sustainability Council, holds a gold STARS ranking. AASHE also provides professional development training, toolkits, and other resources, and conducts an annual conference.<sup>1</sup>

Despite the importance of these efforts, however, the potential for HE institutions to have a significant impact in addressing the climate crisis has been limited. I believe that a major factor holding us back is that the very scientists whose expertise is most vital to informing necessary changes in policy and practice have been reluctant to take on the role of public-facing experts out of a misguided belief that this kind of overt advocacy will undermine their professional standing as objective observers of physical and social phenomena. And while this attitude has shifted recently, in part due to the important role that medical researchers played during the Covid-19 pandemic in trying to communicate critical public health-related knowledge and guidance, in the general population there is still a lack of basic trust and understanding of the processes by which scientific knowledge is generated and the ways in which this information must inform action in all sectors of public life. For HE to achieve this necessary goal, we must

fundamentally rethink the structures of our institutions and their relationships to the broader community.

### Ideas for the imagined university and feasible utopias

In his book *Imagining the university* (2013), Ronald Barnett introduces the concept of feasible utopias as a framework for developing multiple alternative models to guide the redesign and reinvigoration of HE. He suggests three criteria for these reimagined universities:

- i The imagination should be bold and reach out ... beyond the present imaginaries of the university and venture into a space currently denied in the contemporary policy framework ...
- ii The formation of the new ideas should be prompted by a desire to develop ideas and forms of the university which just might enable the university more effectively to promote human well-being ... and
- iii ... [T]he idea(s) in question *could* be realized in policy and practical projects, however unlikely it is that they will be so realized. (p. 27)

In the context of addressing climate change, this requires us to mobilise the vast resources of our HE institutions with the common goal of tackling the multiple impacts of the current crisis. It means working across disciplinary boundaries to create more dynamic and creative solutions to the complex challenges of climate change. And it means taking an active role in drafting and enacting policies and practices at all levels—in government, industry, and civil society—to enact positive change. As Davydd Greenwood ([Chapter 3](#)) states in his critique of current models of higher education:

Given the political and social turmoil in the world and the downward spiral of the planetary ecosystem, it is now urgent that we

learn to apply the best of what we know collaboratively toward solutions to these broad human and planetary problems. (p. 65)

And for many of us reading this, “the best of what we know collaboratively” is action research.

### **Action research in higher education**

In our article, “Carpe the academy: Dismantling higher education and prefiguring critical utopias through action research” (2016), Patricia Gayá and I explored some of the issues Greenwood explores here and in his earlier work with Morten Levin around the reforms necessary to enable HE institutions to fulfil their capacity and obligation to contribute to positive change. In that article, we argue that “action research processes offer us a means for keeping open, rather than shutting down, diverse and transgressive possibilities and debate around the nature of the educational offerings, pedagogical practices, and scholarly commitments we collectively desire for higher education” (Gayá & Brydon-Miller, 2017, p. 37).

Some of the affordances of action research—its specific qualities that make certain things possible—make it especially relevant to the effort to increase the engagement of HE institutions in addressing the climate crisis. These include its emphasis on community collaboration, its focus on creating practical solutions to pressing problems, and its ability to work on complex issues with high levels of uncertainty through iterative processes of action and reflection.

### *Realms of action research*

In a recent chapter, my colleagues Alfredo Ortiz Aragón, Victor Friedman, and I explored the idea that there are multiple aspects or realms of action research (Brydon-Miller et al., 2021). This notion of realms of action research grew out of earlier work Alfredo and I had done exploring the variety of different roles

action researchers need to fill in order to build strong collaborations, develop meaningful research questions, design innovative ways of generating knowledge, and create strategies for translating that knowledge into action (Brydon-Miller & Ortiz Aragón, 2018). We then reconfigured these roles into five distinct realms of action research practice: Realm of Empathetic Relator, Realm of Emergent Design, Realm of Dynamic Sense Makers, Realm of Advocacy and Activism, and Realm of Traditional Research. Each of these realms represents specific tasks and challenges requiring distinct skill sets.

In the *Realm of Empathetic Relator*, for example, the key role of the action researcher is to develop ongoing relationships grounded in mutual respect and common cause with organisational and community partners. This requires a willingness to set aside one's expertise to learn from and with others and an appreciation for the myriad ways in which knowledge can be generated and communicated within and across communities. This focus on the centrality of relationships is reflected across the action research literature and has been one of the most personally meaningful aspects of my own work as an action researcher over the years. At the same time, it is this focus on relationships that often deters those coming from more conventional research traditions from participating in community-engaged practices based on the false belief that these relationships will somehow compromise (rather than enrich) the outcomes of their investigations.

The *Realms of Dynamic Sense Makers and Emergent Design* reflect the flexibility and adaptability that are hallmarks of action research practice. Rather than being based on a traditional hypothesis-testing model in which the methodology constrains the potential outcomes of the research process, action research flourishes in situations of constant change. This demands that researchers engaging in this practice have a high tolerance for uncertainty and open-endedness. But the rewards of this willingness to step off the cliff are manifold and are especially important in addressing issues like the climate crisis. In these situations, so many factors contribute to the problem that it is impossible to

control the contexts within which our research takes place, but at the same time this offers a broad range of potential solutions, if only we are willing to go beyond established understandings and practices in order to embrace novel strategies for addressing the issues at hand.

*The Realm of Advocacy and Activism* is central to the practice of action research. Frankly, it is what made my own move to become an action researcher necessary in the first place, as I sought to find a way to integrate my scholar and activist selves. But it is also one of the aspects of action research that is most daunting to researchers trained in more conventional approaches to research. It simply flies in the face of everything they have been taught about what it means to be a scientist—that is, to be objective and value-neutral, to assume it is the researcher’s task to generate valid understandings of phenomena, and not to decide how this knowledge might inform policy and practice. Inhabiting the Realm of Advocacy and Activism also requires a distinct set of skills and dispositions, including an ability to use multiple formats to communicate our findings and why they matter, and a willingness to build coalitions with others and to engage with policymakers.

One concern Alfredo, Victor, and I (Brydon-Miller et al., 2021) have identified for prospective action researchers is that, although those of us who have academic backgrounds receive extensive training in the *Realm of Traditional Research* through coursework in research methods, the knowledge and skills required of the other realms—effective group facilitation, community organising, policymaking, etc.—most often have to be learned through experiences outside the academy. Nevertheless, with increasing interest in community-engaged research and emerging programmes in action research being offered in some universities, this is beginning to change. This is one reason why it is so important to bring diverse groups of collaborators together in an action research project, because so often it is our community partners who bring those skills of facilitation, mobilising local knowledge, coalition building, and effective communication to the table, enabling us to learn from them.

If we are to successfully contribute to meaningful action to address the climate crisis, these realms of research must extend to include any researcher whose work has the potential for informing and mobilising the public, impacting policy, and effecting change. In the area of climate change research, this would include scholars from Science, Technology, Engineering, and Mathematics (STEM) fields, as well as researchers from the Social Sciences, Arts, and Humanities whose work touches understanding human behaviour and exploring problems through creative expression. But too often research in STEM and Social Science areas is still very much driven by the expert model of knowledge generation in which the academic is responsible for all aspects of the research process. The same is often true in the Arts and Humanities where the artist or scholar, working alone or in collaboration with their peers, makes their insights and creative work available in a unilateral process of knowledge dissemination, designed to inform or perhaps elevate, but not engage, the public at large.

The task at hand for action researchers based within HE institutions and committed to addressing the climate crisis is then twofold. On the one hand we must create and hold spaces within our universities where the practice of action research is valued and the skills and dispositions required by action researchers can be nurtured among our students and colleagues. The other is to reach out beyond these spaces to encourage our colleagues from other research traditions to question the assumptions they have been taught and to encourage them to find ways of inhabiting these realms of research themselves.

### *Centres of action research as enclaves within the academy*

Victor Friedman, in his paper “Revisiting social space: Relational thinking about organizational change” (2011), builds on the work of Lewin, Bourdieu, and Cassirer to explore the notion of social space and how it can help us to understand and influence social dynamics. One aspect of Friedman’s framework that I have found especially useful is the notion of enclaves. “Enclaves constitute

‘alternative’ spaces within a field with rules of the game that are different, and often challenge, those dictated by a larger field of which it is part” (p. 253).

Action research centres and similar spaces in which new and innovative forms of research are developed and practised can serve as enclaves within the larger, more conventional, structures of research within universities. When I helped to co-found and direct the Action Research Center at the University of Cincinnati, I thought of my task as ‘holding the space’ for students, colleagues, and our community partners to operate by a different set of rules—a space grounded in an ethic of care and a commitment to using our research to create positive change. But, as Friedman (2011) goes on to observe, such enclaves:

almost always come under pressure to conform to the larger field, which threatens their alternativeness. On the one hand, they may attempt to maintain their separateness by creating a strong boundary and strongly regulating and restricting the relationship with the larger field. On the other hand, they may attempt to influence the larger field by creating a field in which things can be done differently, thus expanding the range of the possible and challenging the established rules of the game. (p. 253)

I would argue that the alternative spaces we have created to promote and protect action research must engage in this work of challenging the larger field and established rules of the game if we are to fully mobilise the potential for academic research to do its part in addressing the climate crisis. It will take nothing short of the transformation of HE that Greenwood calls for ([Chapter 3](#)) in order for this to happen.

### **My own utopian vision for higher education**

Responding to Barnett’s call for the creation of as many feasible utopias as possible to guide the redesign and reinvigoration of HE, and building on some of the elements in Greenwood’s critique, I decided to create my own version of the Green University.

This new model for HE is built on five key elements: authentic community engagement, transdisciplinarity, sustainability, global awareness, and multiple forms of knowledge. It is also grounded in the conviction that critical learning and creative problem-solving thrive within the context of caring and mutually supportive relationships. Through these characteristics, this model for HE provides opportunities for participants—students, faculty, community members alike—to develop the skills and dispositions required to operate within each of the five realms of action research, which enables the Green University to become an active agent in addressing the climate crisis.

The key to the success of the Green University is in the nature of the relationships it fosters. By recognising that everyone has the ability to contribute to the process of knowledge generation, and that the natural world as well has both rights and wisdom that must be respected, the Green University is able to create unique opportunities for learning and growth, and environmentally caring action, among its participants.

Community engagement has recently garnered a great deal of attention in HE, although this often seems to be more a matter of branding than of actual commitment to genuine collaboration. In my utopian Green University, there are well-articulated relationships between university personnel and representatives of government, business, and industry, the non-profit and civil sectors, schools, and the general public. Research is informed by the needs of the community—as these are defined by the community. And the community is afforded opportunities to deepen learning about these issues, so community members can act as informed contributors to these processes of knowledge generation.

Researchers—faculty, students, and community partners—work together across disciplinary boundaries, drawing upon multiple ways of knowing to understand and address the issues they've identified in more nuanced ways, recognising the fundamental entanglement of these concerns from ecological, political, economic, social, and cultural perspectives.

The Green University is itself a model of sustainability that serves as a space for designing and testing innovative technologies, policies, and practices that lessen the environmental impact of the institution and instead contribute to a more vital and vibrant space for living and learning. This might mean creating new, more energy-efficient structures; setting aside space for food production; or/and developing integrated cross-disciplinary curricula grounded in problem-based learning based within the community (see [Chapter 2](#)). And while firmly embedded within its own local setting, the Green University proposed here is part of a larger international network of campuses committed to promoting the health and well-being of people and the planet, and doing so by sharing knowledge and resources.

### **Integrating the realms of (action) research into the Green University**

A core principle of the Green University is in the value it sets on offering opportunities for learning across the five realms of (action) research. If we are to realise the potential of the academy to inform and mobilise climate-change action, researchers from across the university will need to learn to work confidently in all five of the realms of research outlined here. They must continue to conduct the rigorous and thoughtful research that has been the hallmark of university scholarship, while at the same time embracing the more creative and transformative aspects of knowledge generation captured in the other realms of emergent designers and dynamic sense makers. They must embrace their role as public scholar and activist and find ways to share valuable knowledge they have helped generate beyond the academy in ways that are meaningful and accessible to the general public. And first and foremost, they must work to build relationships of trust and respect with members of that public so that their knowledge, and the knowledge and wisdom from the community, can be combined as a force for creating positive change. [Figure 4.1](#) captures the ways in which these elements of the Green University



**Figure 4.1:** Elements of the Green University (designed by Steven Kroeger for this chapter).

intersect to create a vibrant space for fostering change within and beyond the academy.

### **Finding reasons for hope in current practice: Examples of existing centres of action research promoting positive change**

Barnett (2013, p. 27) calls for the creation of “feasible utopias” that “*could* be realized in policy and practical projects”. I propose that many of the aspects of the Green University I describe here have already been established, giving us hope that these elements might be brought together on a larger scale to create fundamental

change in the basic structures of HE. In some cases, this has been done on an institutional level, but more often it is found within smaller, more informal spaces within the larger organisation. These institutional enclaves can serve as sites for innovation within and across institutions. Existing centres of action research and other forms of innovative scholarship often serve as such spaces within larger institutions, reflecting the core values of action research and creating opportunities for collaboration and creative problem-solving.

An example of an institutional-level commitment to community engagement exists at Malmö University in Sweden. One central aspect of Malmö University is its foundational commitment to partnering with local government as a way of promoting positive change. The intentional establishment of these partnerships provides a structure for ongoing project development and research informed by real-world issues. The Medea Design Lab at Malmö University exemplifies the creative spark that charges the realms of emergent design and dynamic sense-making through its integration of technical innovation and community engagement.

The Sports Performance Research Institute New Zealand (SPRINZ) at Auckland University of Technology in New Zealand has committed to incorporating Indigenous forms of knowledge into organisational learning and decision-making. During my visit there, I was struck by the multiple ways in which Māori language, culture, and world views were integrated into events, leading to a much richer and more reflective outcome for the planning processes in which we were engaged. Both the Community-Based Educational Research entity at North-West University in South Africa and the University of Technology, Sydney in Australia reflect the importance of transdisciplinary research and teaching in the organisation of their research and training programmes.

And we can learn from the example of non-academic settings as well. The Highlander Research and Education Centre in Tennessee in the USA has for over 90 years led the way in integrating popular education, community-based research, and action to address issues from labour organising, to civil rights, to environmental

justice. Similarly, the Society for Participatory Research in Asia (PRIA) and Research Initiatives Bangladesh (RIB) both focus on community-based research to address pressing local issues.

International partnerships and collaborations are also an important means of connecting efforts globally. One such project is the International Climate Change Education project we designed to bring together university-based researchers with middle-school students and educators from Austria, Australia, the Philippines, South Africa, and the United States (Brydon-Miller et al., 2022). The goal was to provide students with the opportunity to learn about climate change in their own communities and then share that knowledge with peers in other parts of the world, enabling them to understand that climate change is happening everywhere, but that it takes different forms and has different impacts depending on where you are and what resources you have to address it. In this project we used a variety of multimodal strategies to link students up with one another, including classroom-to-classroom Zoom calls, a letter exchange, and graffiti walls. We are also continuing to develop Ripple Effects International, a community-based photo contest around themes related to nature and environmental issues that has been conducted in the US and Australia, with plans now in the works to extend the project in the UK. While these projects have focused on younger learners, the same strategies can be used to engage college and university-level students. International service-learning projects offer another opportunity for students to engage in climate-related research and development projects. One example of this kind of project is Adam Stieglitz's dissertation project which brought Engineering students from the University of Louisville to work alongside community members through the Andean Alliance for Sustainable Development, the non-profit organisation he co-founded in Peru, to help the community to map irrigation systems to respond to climate impacts. We are also currently developing a proposal to fund a knowledge exchange between rural communities affected by recent severe flooding events in Eastern Kentucky and the Northern Rivers region of Australia.

These are just a few of the vast range of current projects and programmes in which action research and innovative forms of knowledge creation are demonstrating how we might go about creating a multitude of versions of the Green University to address the climate crisis locally and globally.

### Postscript

It is true that this work faces continuing threats from forces that would silence community voices. These forces promote a status quo where hand-wringing and public displays of concern by governmental and industry leaders mask the lack of genuine commitment to addressing the climate crisis, and where university researchers continue to be sidelined and silenced. Still, I choose to be hopeful about the future. The conclusion of the chapter on the Terrifying Truth reminds us that after all the ills escape into the world from Pandora's box, at the end hope emerges. This hope is grounded in my belief that we can still come together to find ways to address the climate crisis and that HE institutions can—and must—take a leading role in bringing about this change.

### Practical suggestions for consideration, discussion—and action

1. Build alliances both locally and globally with colleagues who share your concerns. Make a point of reaching out across disciplinary boundaries and to a range of community partners to enrich your understanding of the issues and to increase your opportunities to make an impact.
2. Engage with your partners in your own version of utopian thinking. One strategy for doing this is through the Future Creating Workshop process developed by scholars at Roskilde University (Brydon-Miller et al., 2022; Nielsen & Nielsen, 2006). This process invites participants to identify challenges, imagine possible utopian futures, and collaborate in designing strategies for moving forward toward those visions.

## Questions for discussion

1. What does your Green University look like? How would you take up Barnett's challenge to create a feasible utopia to address the climate crisis?
2. What skills and dispositions do you feel are vital for enabling researchers to successfully occupy all five realms of action research? How might we better prepare students to do so?
3. Where do you see change happening? What strategies do you feel are necessary to enable these enclaves to take up the challenge to transform HE institutions to enable these institutions to effectively contribute to addressing the climate crisis?

## Acknowledgement

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## Notes

- 1 See <https://www.aashe.org/>.

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