

Developing stakeholder agency in higher education sustainability initiatives: Insights from a Change Laboratory research-intervention

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1.0 Introduction

This chapter positions Education for Sustainable Development as a project of ongoing educational change, and explores how such change might take place within higher education institutions (HEIs) in ways that empower stakeholders. Our core objective is to explore the central role of *developing participants' collective agency*—often conceptualised in prior literature as capacity building—where institutions attempt to build their own bespoke sustainability strategies.

The literature on educational change emphasises that top-down attempts to impose reform typically fall at the hurdles of ownership, commitment and clarity. Bottom-up change, on the other hand, is difficult to scale and often fails to endure over time. Where initiatives overcome these different problems, it is usually because they succeed in capacity building—meaning, among other things, developing the social capital and sense of motivation *of* and *within* collaborative groups (Fullan 2016). In this chapter we explore how a particular approach, the Change Laboratory, was used as a vehicle for sustainability-related capacity building in one institution in the Republic of Ireland in 2016 with a particular focus on the development of agency of and within a collaborative group of stakeholders.

In the project we draw on, a range of institutional stakeholders—varied in seniority, professional role and disciplinary background—came together in workshops, over several months, and co-designed a range of outcomes. Those include a Campus Sustainability Statement (the main focus of this chapter), a mechanism for highlighting sustainability linkages with the curricula of existing academic programmes, proposals for new academic programmes (now offered), and an outline idea for a research Centre for the Study of Community Sustainability (recently funded). Below, rather than celebrating these outcomes, we explore the nature of the capacity building that was achieved in the group. To do so, we draw on a theoretical framework of *transformative agency*, which foregrounds how the collective agency of people involved in change efforts is produced and maintained over time. We document important aspects of the design of the project; consider how agency was manifested in the change process, with a particular focus on the Campus Sustainability Statement; and draw lessons for how change initiatives relating to sustainability in HEIs might be conceived in future, in order to maximise the chances of capacity building.

The reason for focussing on these issues relates to the emerging scholarly discussion on the nature of sustainability-related change within higher education institutions (HEIs). It has been recognised for several decades that HEIs play a crucial role, throughout wider society and the globalising economy, in supporting change relating to sustainable development. As early as 1972, for example, the United Nations (UN) Conference on the Human Environment in Stockholm acknowledged the centrality of university involvement in sustainability initiatives (Lozano et al. 2013). Moreover, the importance of engaging higher education partners, if global challenges are to be addressed and strategic actions supported, has been repeatedly reaffirmed over the intervening period (Fischer et al. 2015). Yet HEIs have often been seen as lagging behind in enacting sustainability-related change *within their own practices*—thereby damaging their credibility with outside stakeholders, undermining their stated educational mission, and perpetuating the direct environmental footprint of their activities (Lozano et al. 2013). Recognition of this problem has grown in recent years. As Omazic and Zunc (2021) put it in relation to the 17 UN Sustainable Development Goals (SDGs), “HEIs are expected to provide

guidance for various stakeholders on this matter, but also to implement this agenda and the SDGs in their institutions” (p. 1). Such recognition has provided a strong moral imperative, in recent times, for promoting suitability within institutions.

This increased emphasis on sustainability priorities *inside* HEIs has led to a wide array of initiatives that address an increasing variety of functions within particular organisations. Lozano et al. (2015), for example, propose that interventions be categorised according to whether their object is institutional frameworks, campus operations, educational provision, research, outreach and collaboration, on-campus experiences, or assessment and reporting. Yet recent reviews have emphasised that most institutional practice, notwithstanding this variety of initiatives, remains inadequate (Lozano et al. 2015; Berchin et al. 2018; Omazic and Zunk 2021). A recent report from the Environmental Association for Universities and Colleges (EAUC), which generated data from 18 institutions across several countries, suggests that typical problems with institutional initiatives arise from two sources: firstly, the adoption of fragmentary approaches lacking either practical coordination or overall vision and, secondly, the attempt to import models from elsewhere which prove inappropriate to the local context (Appleton 2017). As the foreword to the report highlights:

One key thing the EAUC has learnt in its 20 years is that there is no one standard approach to sustainability. Off the peg or tick box approaches can appear attractive on the surface but change can often be just that, on the surface. For the EAUC, the key to success is for a university or college to define sustainability for itself and build a unique strategy and structure which reflects its particular nature, context and geography. (Appleton 2017, p. 2)

Our discussion, below, of how the Change Laboratory approach was used in one institution does—inasmuch as it involved defining sustainability before building a bespoke strategy—fit Appleton’s template. Our analytical purpose, however, is less to confirm Appleton’s observations about successful initiatives than to understand some of the *means* by which such approaches can be so generative. Recalling our discussion above, we suggest that some of the success of such approaches

is a function of their capacity building. Drawing on the activity theory tradition that underpins the Change Laboratory approach, we seek to map how the research-intervention we describe fostered the *transformative agency* of those who participated. Doing so, we hope, will encourage readers of this volume to understand the importance of associating sustainability in higher education with a concept of *change and development*, rather than (as is more common) one of ‘implementation’ or ‘promotion’.

In this chapter, then, we set out the basic principles that underpin the Change Laboratory approach and the conception of transformative agency that will underpin our later analysis; describe the concrete design of the approach, which involved tailoring the Change Laboratory principles to the problems of sustainability and the context of the institution; identify some of the core expressions of stakeholder agency that were evident as the change process unfolded, illustrating, in particular, how that agency was developed throughout the development of the Campus Sustainability Statement; and discuss the implications for scholarship and future practice in HEIs. Before doing so, we briefly review some pertinent strands of the literature on sustainability in higher education (SHE).

2.0 Literature Review

The body of knowledge on SHE exhibits a near unanimous agreement that universities, and the HE sector in general, have a significant role to play in the creation of a sustainable future. Yet universities can, it is argued, only take on such a role if they are willing to grapple with difficult issues of change within their own institutions (UNESCO 2005; Lozano 2006; Sidiropoulos 2010; Leal Filho 2011; Sterling et al. 2013; Karatzoglou 2013). The case for SHE is thus typically presented in moral and ethical terms: that HEIs have responsibilities in relation to sustainability and must engage with internal change if they are to play a role in creating a just and sustainable future for society more widely (Cortese 2003; Baker-Shelley et al. 2017; Findler *et al.* 2019).

The combination of moral imperative and acknowledged difficulty of change leads to a proliferation of papers highlighting particular issues that must be confronted and overcome. In this review we

briefly look at two issues foregrounded in this literature: the challenges presented by sustainability related terminology, and the role of engagement and empowerment in sustainability initiatives.

2.1 Sustainability-related terminology in Higher Education.

Sustainability, both as a term and as a concept, has multiple interpretations; it is context sensitive and can be interpreted to have a wide range of meanings. The range of understandings about what terms like “sustainability” and “sustainable development” mean are often seen as a significant and problematic issue in HE (Mader et al. 2013; Gale *et al.* 2015; Owens and Legere 2015; Cheeseman *et al.* 2019). Different understandings can, for example, create communication problems (Djordjevic and Cotton 2011) and contribute to an overall lack of understanding and awareness of about what sustainability is, and more importantly, how it be addressed and dealt with.

Such problems are even identified in scholarship. Sustainability and sustainable development (SD) are often used interchangeably in the HE literature (Mader et al. 2013; Holden et al. 2014; Wu and Shen 2016; Viegas *et al.* 2016), yet some authors emphasise that they are not the same thing (Lozano, 2008). Moreover, both terms are subject to a range of interpretations (Gibson 2000; Leal Fihlo 2011b; Sidiropoulos 2012) and can mean different things to different people (Leal Filho 2011). Johnston *et al.* (2007) estimate that approximately 300 definitions of sustainability and sustainable development, each subtly different, are being used in the area of environmental management and similar fields.

Much effort has been placed on providing official and/or precise definitions for such terms. Ralph and Stubbs (2014, p72), for example, describe sustainability as “a paradigm for thinking about the future in which the economic, environmental and social dimensions are intertwined, not separate, and are balanced in the pursuit of an improved quality of life.” Wu and Shen (2016) define sustainability (based on Rhodes 2006) as “the effort to frame social and economic policy so as to preserve, with minimum disturbance, the earth’s bounty – its resources, inhabitants and environments – for the benefit of both present and future generations”.

These definitions are very similar to the broadly accepted, albeit contentious, definition of sustainable development proposed in the report of the Brundtland Commission of 1987:

‘Sustainable development is the development which meets the needs of the present without compromising the ability of future generations to meet their own needs’.

(World Commission on Environment and Development 1987, p42)

Yet even high profile attempts at producing official definitions have proven contentious. Sidiropoulos (2012, p.45), on the other hand, offers a different perspective:

Sustainable development (SD) is regarded as the vehicle for shifting away from the dominant (growth oriented) model of development towards one that is able to balance needs of people (social development), planet (environmental development) and profit (economic development). However, SD cannot be absolutely defined and there is no “one size fits all.”

Both concepts revolve around the convergence of three entities—people (social); planet (environment); and profit (economy)—which are popularly known as either the three pillars of sustainability or the triple bottom line (TBL). In turn, models of sustainability are often considered “weak” or “strong” based on the extent to which these entities are seen as interacting and how their connections are framed:

Weak sustainability (mechanistic/functional approach) assumes that human and natural capital are interchangeable entities and that sustainability is achieved as a coincidence of the three pillars. This form is regarded by many proponents (Barrett 1996; Flavin 2010; Meadows, Randers and Meadows 2004; Orr 2009; Steiner and Posch 2006; Thøgersen and Crompton 2009), as unlikely to restore the earth’s natural capital for future generations”. (ibid.)

The “strong form” on the other hand, is seen a holistic approach which situates the economy centrally, but depicts it as subordinate to and nested within society, which, in turn is nested within the environment.

The fundamental difference in focus between these two views of sustainability (a coincidence of the three pillars, as against an unequivocal hierarchical relationship) reflects a chasm that exists when it comes to perceptions of the concept.

Such debates have led, in some quarters, to an emphasis on conceptual pluralism. Lozano (2018), for example, emphasises that there are no clear definitions of sustainability in organisations and that the same is true for HE. It is widely acknowledged that terminological issues are problematic in HE (Mader et al. 2013; Figueiró and Raufflet 2015; Gale et al. 2015; Owens and Legere 2015; Cheeseman *et al.* 2019), it is clear that this can lead to problems when trying to get groups of people to agree on a set of ideas or a course of action, yet attempts to resolve such issues have proven unsuccessful.

Yet competing concepts are not random but a product of wider practices and social structures. With specific references to HE, Gale et al. (2015), for example, suggest that this situation of “conceptual multiplicity” reflects a “disciplinary contestation”, which highlights the need for interdisciplinary collaboration but also the problems that multi-disciplinarity brings to fields of enquiry and action.

Many authors suggest that sustainability education benefits from an holistic approach where environmental, global, social and cultural issues are explored from an inter, multi and/or transdisciplinary perspective e.g. Green (2015); Dlouhá et al. (2017); Cheeseman *et al.* (2019).

Gale states that, because concepts, world views, and values relating to ‘sustainability’ are variously constituted in different disciplines, they can create confusion over what sustainability is within HEIs. Such confusion brings issues for action in HEI initiatives. According to Ralph and Stubbs (2014), for example, a lack of clarity (on definitions) can lead to a lack of staff commitment to implementing sustainability programmes (Evangelinos and Jones 2009; Wright 2010).

One of the most obvious problems related to lack of definitions and lack of clarity are issues with communication. Djordjevic and Cotton (2011) conclude that, if two parties do not share the same understanding about the meaning or value of sustainability, then actions carried out based on the 'receipt' of communication may be at odds with the original intentions.

Such issues are central to the project we report on in this chapter. From the beginning, we were aware of the importance of taking a multi-disciplinary approach if change was to be fostered within the institution, but wary (justifiably, as it turned out) of the conceptual contestation that might arise as a consequence of doing so. In the account that follows we emphasise how the Change Laboratory approach supported stakeholders from a range of backgrounds within one particular HEI to confront and address such terminological issues.

2.2 Stakeholder engagement and sustainability initiatives in Higher Education.

Stakeholder engagement is typically seen as important because it serves as a *driver* for SHE. Some writers emphasise the role of particular stakeholders in institutionally senior or strategic positions. In such writing, leadership, consistent and effective communication (Adams 2013; Vargas et al. 2019), and a clear commitment from senior management are considered key drivers for SHE (Hoover and Harder 2015). Other authors (Adams 2013; Mader et al. 2013; Too and Bajracharya 2015; Godemann *et al.* 2014; Aleixo et al. 2018) place more emphasis on engagement by participants and stakeholders in a more general sense. Within particular institutions, such positions are not mutually exclusive. Indeed, one purpose of clear communication, from management, about commitment and leadership is to foment and encourage stakeholder engagement more generally. Yet most of the literature emphasises how stakeholder engagement can be promoted at particular levels: as a consequence of strategic approaches, organisational culture, or individual commitment.

A wide range of *strategic approaches* for promoting and developing staff engagement have been suggested in the literature. The most notable are:

- Including sustainability in the HEI strategy (Adams 2013);
- Signing a sustainability declaration or charter (thereby allowing members of the University to specify its meaning during internal negotiation about its integration at the institute) (Müller-Christ *et al.* 2014);
- Developing mission statements and sustainability guidelines (potentially derived from the content of declarations that the HEI are signed up to) (Müller-Christ *et al.* 2014; Velazquez *et al.* 2006);
- Promoting inter and multi-disciplinarity in research and programme design (Adams 2013);
- Providing coordination units or processes to help keep projects alive and distribute responsibility (Ferrer-Balas *et al.* 2008).

A second strand of scholarship emphasises that stakeholder engagement is largely a product of *organisational culture*. Verhulst and Boks (2014), for example, propose that employee empowerment can be a significant change driver or success factor for the implementation of SHE. Other authors call for a culture of connectedness. Müller-Christ *et al.* (2014) and Wright (2002), for example, cite the need for a universities to connect, within actual practice, curriculum, campus, research, and community strategies and action.

Other authors, meanwhile, argue that, while management can employ a range of measures to encourage staff engagement with SHE, it is ultimately down to the level of *commitment of each staff member as an individual* as to how this is demonstrated or enacted. The role of individual commitment has been identified as a key driver (Verhulst and Lambrechts 2015), with individual leaders and “sustainability champions” therefore viewed as vital in overcoming the challenges of

embedding sustainability within HE (Christensen et al. 2009; Ferrer-Balas et al. 2008; UNESCO, 2006; Lozano 2006b).

It is still relatively unusual in the literature for authors to consider relationships between these different levels or how those relationships serve to drive SHE, though particular examples can be found. A culture of employee empowerment, for example, is positioned by Akins *et al.* (2019) as a motivational tool, whereby administrators, faculty, staff, and others become sustainability proponents. It has also been recognised that individuals working collectively (in groups) can be a good vehicle for driving SHE; it has been noted, for example, that ‘green campus’ (or ‘green flag’) initiatives have been a significant contributor to SHE for many years (Dahle and Neumeyer 2001; Leal Filho *et al.* 2015; Amaral *et al.* 2020). In our view, such examples are particularly important, and in this chapter we wish to highlight *how* such a group worked to develop and nurture individual passions and commitments about sustainability into a vehicle for reimagining organisational culture and suggesting strategic approaches (many of which have since been implemented). Our chapter places a particular emphasis on the *process* by which this was achieved, which has received scant attention in the existing scholarship.

3.0 Transformative agency

The theoretical framework we use to frame our analysis in this chapter is *transformative agency* (Haapasaari, Engeström & Kerosuo 2016). That framework has arisen from a long trajectory of research in the activity theory tradition (which we discuss in more detail below), by scholars investigating corporations undergoing complex transformation in the wake of radical economic and technological change. We adopt the framework in this chapter because it has long been used to examine how people develop agency within organisational change efforts, and because its framing of agency as a form of joint subjectivity resonates with aspects of the capacity building that the literature argues is so essential for successful change in educational institutions. We are aware that, at the time of writing, the framework has not been much used in the literature on sustainability or SHE, and for that reason we introduce the principles in some detail.

Transformative agency proceeds from the recognition of what Virkkunen (2006) calls “an increasing need for deep qualitative transformation in business activities involving the development and implementation of entirely new concepts” (p. 43). Transformative agency, in short, attempts to address questions concerning the kinds of agency that are required for such qualitative transformation to occur.

3.1 Conceptualising stakeholder agency

The general notion of agency has become increasingly central to discussions of change and development across broad swathes of the social sciences. In broad language, the term refers to how people actively strive towards objectives, take initiative, and/or influence their own lives. Yet scholarly attempts to formulate what comprises agency more precisely have been highly contentious, to the extent that Eteläpelto et al.’s (2013) review acknowledges that there is “confusion surrounding the whole concept” (p. 46). Indeed, where comparisons are made even between the best-known conceptions of agency—such as the agency-structure approach of Giddens, the analytical dualism of

Archer, the knowledge/power-based framework of Foucault and the temporality-based conception of Emirbayer and Mische—there are wide divergences on important issues such as autonomy, knowledge, context and power (Pattison 2020).

The distinctive argument of those scholars who have developed and promoted the notion of *transformative agency* is that, where change happens within complex cultural social formations, it is because people come together and enact change as a group, with the collective exhibiting a form of agency that cannot be reduced to that of the separate individuals in the group. Scholars of this view, therefore, criticise much existing literature on grounds of individualism and for insufficiently accounting for how change (and especially radical change) is actually accomplished as a process. Work on transformative agency, as a consequence, deliberately foregrounds how individuals come together to form a collective subject, and how, in doing so, they break away from the social situation that confronts them and progressively develop initiative to transform that situation (Virkkunen, 2006). The effect, as Haapasaari, Engeström & Kerosuo (2016) underline, is to shift analytical attention towards the transitions that occur as people work towards systemic change:

Transformative agency differs from conventional notions of agency in that it stems from encounters with and examination of disturbances, conflicts and contradictions in the collective activity. Transformative agency develops the participants' joint activity by explicating and envisioning new possibilities. Transformative agency goes beyond the individual as it seeks possibilities for collective change efforts. [...] [T]ransformative agency is not limited to the relations of an individual expert in that it underlines the crucial importance of expansive transitions from individual initiatives toward collective actions to accomplish systemic change. Transformative agency also goes beyond situational here-and-now actions as it emerges and evolves over time, often through complex debates and stepwise crystallisations of a vision to be implemented. (p. 233)

Transformative agency has been used in scholarly work for some time and has proven its value as an analytical approach in understanding radical transformation (Engeström 2011). It has also been used to study relationships between change and empowerment in HEIs more specifically (Moffitt 2019). Common points of emphasis in studies of transformative agency include how interprofessional working, social accountability and multi-vocal challenge are developed and nurtured, and—reflecting the rejection of one-size-fits-all approaches in the sustainability literature—the acknowledgement of diversity between activities and organisations.

Studies of transformative agency have long emphasised that developing such agency is a *process*. The development of transformative agency, where successful, will involve a movement, over time, from rudimentary expressions of opinion to commissive speech (publicly committing to action), and from individual initiative to better coordinated forms of joint action. Yet the process is certainly not smooth, with attempts to develop joint agency encountering a range of false starts, changes in direction and, in some cases, outright failure. Recent scholarship on the topic has sought to understand these processes in more detail via detailed examinations of the dynamics of change processes (Haapasaari, Engeström & Kerosuo 2016).

Two notions arising from this scholarship are crucial for our subsequent narrative in this chapter: firstly, that it is important to understand how agency is being *expressed* by participants as change efforts unfold and, secondly, that the development of the agency of the group is heavily shaped by influential moments—*turning points*—which change their perspective.

3.2 Expressions of transformative agency

Studying how transformative agency is being expressed by participants in change initiatives typically involves recording meetings within the initiative and examining speaking turns made by the various participants. Haapasaari, Engeström & Kerosuo (2016) propose the following typology for understanding how transformative agency is expressed in such meetings:

- *Resisting* suggestions, initiatives or the direction of the overall change effort, in ways that might be directed at managers, co-participants or other colleagues, or the researchers present;
- *Criticising* existing ways of working in the organisation;
- *Explicating* new potential in the activity being discussed, typically by recounting positive experiences;
- *Envisioning* new ways of working, by making suggestions for new models or patterns;
- *Committing* to taking action to change the activity, in ways that are concrete and time-bound;
- Reporting *taking actions* to change the activity, typically in-between meetings of the change initiative.

In what follows, we will use this typology to structure the analysis of the Change Laboratory project—drawing attention to examples of each expression of transformative agency, and considering how the design of the research-intervention supported participants in developing the agency underpinning those expressions.

3.3 Turning points in the development of agency

Understanding the development of transformative agency as a process should not be taken to mean that the process is gradual, linear or smooth. The concept of *turning points* has been used in the literature on transformative agency, as Haapasaari, Engeström & Kerosuo (2016) summarise, to draw attention to events that result in abrupt transitions in how participants engage with a change initiative. Turning points have been variously discussed as events that:

- change the focus of the initiative;
- lead to a widening or narrowing of perspective about the existing point of focus, or
- mark a distinct change in the quantity and/or category of discursive expressions of agency (p. 243).

In the analysis we present below, we shall discuss how the different discursive expressions of agency we encountered were associated with turning points in the change initiative. The purpose is to

underline that nurturing and developing participant agency is important across the length of sustainability-related change initiatives in HEIs, and that doing so can have a range of impacts throughout.

4.0 The Change Laboratory

The design of the institutional initiative we document in this chapter is based on the Change Laboratory, an established methodology for conducting research-interventions in which the purpose is to generate research knowledge within genuine change efforts (Virkkunen and Newnham 2013). In this section, we explain some of the relevant tenets of the approach so that the reader may understand the rationale behind the project design we discuss subsequently.

Compared with work in other interventionist traditions, such as design-based research and action research, the Change Laboratory approach places greater emphasis on how participants identify (and successively reformulate) the nature of the problem being confronted as the initiative proceeds (Virkkunen and Newnham 2013, p. 9). Participants in such projects generate their own concepts, refine them as they are explored and implemented and, in the process, come together to develop both new systems and their own agency. The focus of the Change Laboratory approach, then, strongly resonates with what Appleton's (2017) report recommends as a successful approach to sustainability-related change (discussed in the Introduction). Though the approach has been more extensively used in technology industries and medical system reform than in universities, there is a growing body of work that examines how the Change Laboratory can be used to support radical change in HEIs (Bligh and Flood 2015). To the best of our knowledge, however, the approach has not previously been applied to specifically sustainability-related initiatives in HEIs—though it has been used to support the development of sustainable agriculture initiatives in farming communities (Mukute et al. 2018).

The Change Laboratory arises from a long tradition of interventionist research commenced in the 1920s by Lev Vygotsky (Daniels 2008). Vygotsky sought, in laboratory experiments, to investigate the Zone of Proximal Development—the space between what is currently done and what can be done

with extra assistance—for an individual experimental subject. The Change Laboratory, by contrast seeks to help a group of practitioners explore the Zone of Proximal Development of *their own real activities* with assistance from an interventionist researcher. In practice, doing so involves a group of practitioners meeting together, over a period of time, to address tasks in a series of workshops.

A range of more lengthy descriptions of the Change Laboratory approach, each with their own particular nuances and points of emphasis, can be found elsewhere (e.g., Daniels 2008, Ch6; Virkkunen and Newnham 2013; Bligh and Flood 2015; Morselli 2019). But three aspects, in particular, are crucial for understanding the present project: the basis of the approach in activity theory, the use of expansive learning to provide a strategy-level structure for the intervention, and the use of the double-stimulation principle to design workshop tasks. We describe these below.

4.1 Activity theory

Activity theory is an established and mature approach for understanding practice which, like the Change Laboratory, has a strong heritage in the theories of Lev Vygotsky (Blunden 2010). The theory has been used in an extensive array of academic disciplines, and has, in recent times, been imported into higher education studies, where it is valued for its ability to grasp the dynamics of complex situations, its emphasis on understanding how phenomena arise within a cultural and historical context, and its strong focus on change and development (Bligh and Flood 2017). While activity theory is extensive and sophisticated, the core principles of direct relevance to the subsequent narrative in this chapter are as follows (cf. Moffitt and Bligh 2021, pp. 127-128):

- *activities* (sustained, collective projects of human *subjects*) are distinguished from *actions* (subjects' time-bound pursuit of goals), with actions understood as deriving their meaning from their broader position within the wider activities that generate them;
- activities are *oriented* towards *objects*, meaning materially existing items that those participating in the activity derive motivation from working on;

- activities are *mediated by artefacts*, meaning other items (such as tools) that subjects use to work on the object, as well as various social structures and rules that arise within the activity which guide how work on the object is undertaken;
- activities are *changing*, with current forms of activity having arisen out of *historical* precedents and developing into new forms;
- the engine of *development* within activities are *contradictions* within and between different aspects of activity that those participating experience and try to overcome, thereby modifying the activity (importantly, their modifications do not always work in the ways that were intended).

Activity theory plays several roles in the project we describe in the present chapter. We use it to conceptualise sustainability-related reforms in HEIs as the development and change of activities, and to position the project, based on the Change Laboratory, as an activity whose object is those existing activities that participants wish to change (in other words, we are creating an activity whose purpose is to ‘work on’ other activities and change them). The process of the project is disaggregated, as elaborated further below in section 4.2, into a series of *actions* which derive their purpose from the wider change effort. Task designs, meanwhile, place considerable emphasis on the artefacts mediating participants’ efforts, including the use of diagrammatic means to represent activity structures to participants.

4.2 Expansive learning

Expansive learning is a notion developed, within the scholarship on activity theory, by Engeström (1987), for the purposes of conceptualising radical change in activities. For Engeström, ruptural change in activity is characterised by subjects experiencing and identifying acute contradictions in enacting the activity and, as a consequence, changing it in ways that involve qualitatively transforming—“expanding”—its object. For Engeström, it is ongoing attempts at such radical change in activities that construct novel ideas and practices within particular cultures, to the extent that expansive learning can be characterised as “learning what is not yet there” (Engeström 2016). Such a

form of learning is seen as increasingly important, in the activity theory tradition, given that societal challenges increasingly require subjects to go beyond the acquisition, replication and application of predetermined knowledge towards conceptual and practical innovation.

It is important to acknowledge that not all attempts at such radical change are even remotely successful in achieving their aims. Yet, where expansion of the object *is* achieved in practice, Engeström's (2016) work suggests that subjects will have undertaken a range of actions whose goals can be categorised into the following ideal-types (pp. 47-48):

1. *Questioning*: rejecting or criticising established aspects of activity;
2. *Analysis*: investigating, representing and explaining (a) the structure of the present activity and (b) the earlier activities that have led to the present ways of working;
3. *Modelling*: devising simplified but explanatory models of new ways of working that might overcome present contradictions;
4. *Examination*: exploring the dynamics, potential and limitations of proposed models by debating their application and considering test cases;
5. *Implementation*: applying models in practice at small scale and identifying how they work in concrete terms;
6. *Process reflection*: evaluating the progress of attempts at change and how those attempts align with the motivations of the people participating;
7. *Consolidation and generalisation*: embedding models as new forms of practice at wider scale.

Engeström's work suggests that actions of the above types do not occur in a linear fashion, but instead form *cycles* as change initiatives move forward, encounter stumbling blocks, and re-visit earlier decisions and proposals.

While expansive learning does occur 'in the wild', the Change Laboratory approach that underpins the project we describe in this chapter is an explicit attempt to nurture or accelerate it; indeed, Moffitt

and Bligh (2021) have called the Change Laboratory a *pedagogy of expansive learning* precisely because it involves researcher-interventionists designing a microcosm environment for the purposes of stimulating expansive learning and thus changing real activities. In the project we describe in this chapter, the typology of expansive learning actions we list above were used as the basis of the project's strategy—for example, a specific task for a workshop might be designed to address a goal related to *questioning*.

4.3 Double-stimulation

The other important principle for the project we describe is *double-stimulation*, an approach to designing tasks which also originates in the tradition of Vygotsky (Sannino 2015).

Double-stimulation involves introducing a problem, known as the *first stimulus*, which subjects are given the goal of addressing. Yet the problem is of such a type (and has been formulated in such a way) that obvious solutions are absent, and participants experience it as conflicting. Subsequently, another artefact, known as the *second stimulus*, is introduced, which provides participants with a framework for addressing the goal of the problem.

Such task structures have long been understood, as Sannino (2015) says, as a way of promoting volitional action in experimental subjects. Indeed, doing so was the focus of Vygotsky's original experiments, in which the double-stimulation principle was first developed. In the Change Laboratory, double-stimulation is used as the basis for collective task designs (Virkkunen and Newnham 2013; Bligh and Flood 2015) and considerable attention has been devoted to understanding the kinds of first and second stimuli that participants in change efforts might address. Given that Change Laboratory tasks are typically carried out by stakeholders in group meetings, the first and second stimuli of double-stimulation tasks are usually accompanied by *mirror data*—concrete examples of the kind of dilemmas and problems being discussed. Moffitt and Bligh (2021), for example, report extensive use of video footage to fulfil this function, though a range of other alternatives are possible, such as institutional documents, graphs, statistical reports, and

photographs. Importantly, as the project goes on, resources developed by participants themselves in earlier sessions (such as a map of a proposed new activity) are often brought back to serve as components of new tasks: thereby contributing towards cumulative knowledge building in the project, and reinforcing participant influence over the initiative.

It is these principles—a Change Laboratory research design, using activity theory for conceptual framing and analysis, expansive learning for strategy, and double-stimulation for the design of particular tasks—that formed the underlying basis of the project we describe in this chapter.

5.0 Research Design

5.1 The research site

Projects based on the Change Laboratory approach start out by choosing an *intervention unit* to be the focus of the change (Virkkunen and Newnham 2013). It is understood that any intervention unit can generate concepts and practices, whose later generalisation will be a stepwise, active and contested process. But the starting point for a research-intervention is, nonetheless, consequential, and needs to be considered strategically. In higher education settings, the choice of intervention unit can be difficult: ideally it is one “where there is recognition of a need for change, an organisationally strategic position, and sufficient stability to cope if matters become intense”; yet it might also be a unit where the researcher has access, or where they already work, with the selection therefore strongly constrained (Bligh and Flood 2015, p. 155).

For the present project, the intervention unit selected was a whole campus in the West of Ireland; this was considered manageable because the site was a small, auxiliary campus (c. 1000 students) within a multi-campus Institute of Technology (total student population 12,000). The research site was chosen because a number of programmes focused on particular aspects of sustainability were already delivered there; for example the outdoor education programme has a focus on environmental management and sustainability. The range of programmes offered meant that there was wide range of disciplinary expertise available on site which is often considered essential for success of sustainability related initiatives. Correspondingly, a strong staff interest in sustainability was already evident on the campus. One of the researchers was, at the time, also working there as a member of the academic staff, and thus had access to the staff and management. A prior interest in sustainability was also held by some members of campus management and this created a fertile environment in which to explore a more integrated approach to embedding sustainability into the practices and activities on the campus.

The campus had previously established a track record on environmental issues in 2011, by becoming the first Institute of Technology (IoT) campus in Ireland to achieve a “Green Flag” for Waste and Water under the national “Green Campus programme”. The campus has since been awarded three additional Green Flags—for Energy, Biodiversity and Transport.

5.2 Conceiving the project

As outlined above, sustainability and the environment were issues that attracted a lot of interest and activity from certain members of the staff in the campus. This manifested itself through involvement in Green Campus programmes and the inclusion of sustainability related topics in the curriculum of some programmes on the campus. Yet, prior to the present project, these activities were, in the main, “bottom up” initiatives: instigated and driven by individual lecturers who were interested in particular aspects of sustainability and who sought to incorporate it into their own modules and programmes. There were no formal sustainability policy or plans anywhere in the wider institute and, aside from the Green Campus initiative, there were no sustainability focussed inter/cross-disciplinary activities being carried out on the intervention unit campus. Thus, in spite of a groundswell of support for sustainability, sustainability related activities were being carried out in isolation and were not having the desired impact on the wider institute or on the students. This is in line with Appleton’s (2107) observation, discussed in the introduction, that fragmentary approaches lacking practical coordination or overall vision are common, but problematic.

5.3 Recruiting stakeholders

An early step for the project involved considering participant recruitment. We referred to Virkkunen & Newnham’s (2013) criteria, which suggest, firstly, striving to include an appropriate range of voices (from a range of roles, including both management and staff) and, secondly, trying to ensure that they “are dealing with the same object in their daily work and are involved in realizing the same final outcome despite differences in their occupation, task or hierarchical position” (p.65). While these

criteria are often seen as potentially conflicting (ibid.), in this project there were indeed common objects and outcomes that a variety of members of staff and management were each seeking to achieve: attracting students to the campus to ensure its viability (given widespread reorganisation in the sector within Ireland) and making sustainability a focus of the practices on the campus. Thus, we attempted to recruit participants who would be aligned with these objects.

Participation in the CL process was made open, in principle, to all staff from the campus (an email was circulated among staff, outlining that a research project on ESD and sustainability was going to take place on the campus, and requesting expressions of interest in taking part), though in practice most participants were enlisted through direct contact by the researcher. The selection of candidates was based on previously exhibited interest in the general area of sustainability and environmental issues. Participants were contacted individually, with recruitment prioritising the following criteria, all of which included both staff and management:

1. Membership of the Green Campus Committee
2. Membership of the (informal) environmental and sustainability group
3. Staff teaching subjects directly related to the environment or who had a previous record (on the campus) of environmental or sustainability related activities.

Virkkunen & Newnham (2013) suggest a typical figure of 20 participants, and once there were 22 participants confirmed, further recruitment activities stopped.

5.4 Designing stakeholder workshops

CL interventions typically involve 5-12 workshops and at the outset, it was anticipated that 8 sessions would be needed to complete the process. The CL sessions were designed to guide the participants through cycles of expansive learning actions which, as described earlier, is part of the strategic backbone of the CL methodology. Correspondingly, in the initial plan, tasks within each workshop were designed to engage with appropriate goals of expansive learning actions and to do so using double-stimulation principles.

The planned schedule and initial design intentions (in terms of expansive learning actions) are presented in Table 1, along with the actual stages of the ELC observed during the intervention. As for many intervention projects of this type, it was only possible to plan in detail the tasks and stimuli for the first one or two sessions, because the outcomes of these sessions will influence the direction and subject matter of the following sessions. Nonetheless, it is possible to prepare an outline plan of the project from the beginning, which is often useful for thinking strategically about the change initiative even if the plan needs to be amended as action unfolds in the project. Prior to the first 'formal' CL workshop, an introductory session was held, which provided an introduction to the research project, a description of the methodology, and an outline of what was expected from the volunteers, should they agree to participate.

In line with the concept of expansive learning, the primary intention of the first session was to get the participants questioning and criticising existing sustainability related practices on the campus. The focus on questioning carried over into session 2, where the participants started to analyse why current practices were as they were, in terms of historical reasons, as well as the inner systemic nature of the practices. That analysis, in turn, carried over into session 3, and with participants subsequently starting to model new practice solutions, which continued in session 4. This process of designing workshops to correspond to expansive learning actions continued until the end of the project. An overview of the design for each session is provided in table 2, which provides details of the main tasks (1st stimuli), solution frameworks (2nd stimuli) and concrete examples (mirror data) used.

After each session, the researcher reviewed the recordings and prepared minutes and notes, and an agenda for the following session, using the expansive learning to support strategic thinking about the ongoing direction of the project. The researcher then emailed the minutes, agendas and any additional material needed for the next session to all participants, thus ensuring that all were kept up to speed even if, as occasionally happened, they missed a session.

As it turned out, the intervention consisted of 8 sessions and, as discussed in the introduction, resulted in a number of significant practice outcomes for the campus. For the purposes of this chapter, we

focus in on one of those outcomes in particular—the development of a Campus Sustainability Statement (CSS). Below, we shall examine how this particular outcome influenced, and was influenced by, the development of stakeholders' transformative agency during the process.

Mapping the stages of the Expansive learning cycle to the sessions		
Description of planned stage and initial design intention.	Session number, dates and intervals	Actual focus of action when judged against the expansive learning cycle
Type 1 Questioning: people reject established wisdom, current practices, and existing plans;	Session 1 Planned 11/01/16 Actual 13/01/16	Type 1: Questioning and criticising
Type 1 Questioning: people reject established wisdom, current practices, and existing plans;	Session 2 2-week interval Planned 25/01/16 Actual 27/01/16	
Type 2 Analysis: people investigate and represent the structure and history of the present situation;	Session 3 2-week interval Planned 8/02/16 Actual 10/02/16	Type 2: Analysis
Type 3 Modelling: people pose a new, simplified model that aims to explain the situation in a public form and to suggest potential solutions;	Session 4 2-week interval Planned 22/02/16 Actual 24/02/16	Type 3: Modelling
Type 4 Examination: people work with the model to better comprehend its dynamics, potential and limitations;	Session 5 3-week interval Planned 07/03/16 Actual 16/03/16	Type 4: Examining
Type 5 Implementation and Reflection: people render the model more concrete by applying it practically and conceptually, so enriching and extending it;	Session 6 3 weeks Planned 04/04/21 Actual 6/4/16	
Type 6 Process reflection: people evaluate their current process, generating critique and identifying further requirements;	Session 7 4 weeks Planned 18/04/16 Actual 3/5/16	Type 5: Implementation Type 6: Process reflection
Type 7: Consolidation and generalisation: people attempt to embed stable forms of new practice.	Session 8 3 weeks Planned 03/05/16 Actual 30/05/16	Type 5: Implementation Type 6: Process reflection Type 7: Consolidation and generalisation.

Table 1 Actions of the expansive learning cycle mapped onto the CL research workshops

Stage of the ELC.	Session: no	First Stimulus or session Tasks	2 nd Stimulus	Mirror Data
	Introduction 60 minutes, 15 participants			
Questioning	13/01/16 Session 1 133 mins ,15 p.	<i>Discuss the concepts of sustainability in HE. How does ESD relate to you own practices? What is the status of SHE on the campus></i>	<i>Visual prompts Hard copies of a range of SHE documents and journal articles</i>	<i>Answers given by individual participants recorded and displayed on flipchart sheet for others to reflect on</i>
Analysis	27/01/16 Session 2 97 mins, 11 p.	<i>What would a sustainable IoT look like? Identify SHE practice priorities for the campus. What are the barriers to SHE on the campus?</i>	<i>Visual prompts Hard copies of a range of institutional SHE documents and journal articles</i>	<i>PowerPoint presentation and printed summary of session 1 material</i>
Modelling	10/2/16 Session 3 110 mins, 14 p.	<i>Develop a mission statement for the Campus. Discuss the potential of the practice proposals identified in session 2.</i>	<i>Sample definition of HESD Reference to examples of how other HEIs implement SHE</i>	<i>Hard copy summaries of the SHE related activities of the participants provided</i>
	24/02/16 Session 4 91 mins, 12 p.	<i>Consider and develop the proposals made in the previous session, the 'Mission Statement', institute strategy and new programme development.</i>	<i>Expansive learning diagram, Institute Strategy, A previous SHE related proposal for the campus.</i>	<i>Hard copy summary of material generated in previous sessions.</i>
Examination	16/03/16 Session 5 86 mins, 11 p.	<i>Sense-check purpose of the mission statement. How can the models be operationalised?</i>	<i>Outlining the main research objective</i>	<i>Material generated in the previous session.</i>
	6/4/16 Session 6 64 mins, 10 p.	<i>How can the models be operationalised?</i>	<i>Reference to examples of how other HEIs implement SHE</i>	<i>Material generated in the previous session.</i>
Implementation/ Process reflection	3/5/16 Session 7 49 mins, 12 p.	<i>Reflect on the proposed wording of the CSS Reflect on the proposed sustainability paragraphs How can the (CL) process be built upon</i>	<i>Summary of materials from early in the project (Reflecting on how the statement and the paragraphs address the task identified earlier)</i>	<i>The CSS statement The programme sustainability paragraphs Summary of outputs</i>
Implementation/ Process reflection/ Consolidation		<i>Review the work and outcomes of the process and reflect on how these might be continued.</i>	<i>Expansive learning cycle diagram (emphasis on reflection in the context of expansive learning).</i>	<i>The wording of the proposed statement, and programme sustainability paragraphs</i>

Table 2 Summary of Change Laboratory session design

5.5 Data generation and analysis

Change Laboratory research-interventions typically generate a lot of raw data, including video footage, the associated notes and minutes, flip chart materials and full transcripts from each session. In this project, additional transcripts from post-intervention semi-structured interviews were also generated. The data is effectively processed and analysed three times: initially, during the sessions, participants' work constitutes an ongoing, collaborative analysis of data that unfolds in real time alongside the generation of new data (we call this form of collaborative knowledge production *inter-session analysis*); the researcher-interventionist then examines data from a given session afterwards, to support and facilitate the ongoing design of the project (we call this work, which must be completed in time for the next workshop, *intra-session analysis*); and, subsequently, a *post-intervention analysis* is undertaken for the purpose of producing research outputs (and, often, institutional reports).

In this case, the initial inter/intra session analysis of the video footage and notes served the design of the intervention by identifying and summarising the outcomes from each session, which were necessary in order to design and produce the tasks, tools and activities required for the following workshops. The video footage from each session, in particular, was analysed between sessions by the researcher and used to create detailed minutes which recorded the significant outcomes from each session. These were then circulated to participants via email, in a timely manner, along with an appropriately designed agenda/plan for the following workshop. It is important that participants can see how the design for upcoming workshops has been influenced by their working in earlier sessions. It is also worth noting that, in addition to carrying out the session tasks, participants were actively encouraged to take part in the intra-session analyses and, in practice, made many significant contributions which were recorded and distributed alongside the project minutes.

The post-intervention analysis of the video footage and transcripts, on the other hand, forms the direct basis of the account we present in the next section. For the purposes of this chapter, that analysis was carried out with the intention of identifying and extracting information relating to the following:

- a. Turning points in the development of the Campus Sustainability Statement which influenced the development of the stakeholders' agency;
- b. Manifestations of expressions of transformative agency (see the framework in section 3.2);
- c. Relationships between the stakeholders' transformative agency and the development of the Campus Sustainability Statement.

For the purposes of the analysis presented in this chapter, it is worth highlighting that the relevant sections of the videos and the associated transcripts were reviewed with the single purpose of discerning their place in the typology of transformative agency expressions, using the previously outlined framework. Doing so involved making judgements about both the content and context in which the dialogue occurred. This process required a number of repeat viewings of the footage as well as reviews of the transcripts.

6.0 Findings

In CL research-interventions, as described above, the development of stakeholders' transformative agency is part of a process that also encompasses the development of new concepts and practices. In this case, to assist the illustration of our narrative, we specifically hone in on the development of that agency as it co-occurred with the conception and design of the Campus Sustainability Statement (CSS). For that reason, the next subsection (6.1) sets out how the CSS was developed in the project, which, our analysis highlights, occurred via five turning points. The subsequent subsections (6.2-6.6) document, in turn, the forms of stakeholder agency that were influential on the process at each of those five turning points.

6.1 Development of the Campus sustainability Statement.

In order to provide a chronological framework for the development of the CSS, below we map the process in terms of turning points identified during particular sessions. The notion of turning points was described in section 3.3; it refers to events that can change the focus or perspective of an initiative and mark a distinct change in the quantity and/or category of discursive expressions of agency. In relation to the development of the CSS, we identified five such turning points:

1. Recognising the lack of a sustainability framework;
2. The idea of a mission statement as a shared framework;
3. A proposal for a mission statement that encourages students to think for themselves;
4. Determining a suitable title for the statement and seeking inclusion of all campus stakeholders;
5. Emphasising the importance of expressing commitment.

Each turning point represent a key event in the development of the CSS. In table 3 we present the session timeline showing the turning points, the session in which they occurred and a brief summary of the context in which they arose.

Session No	Turning point	Development Context
1	<i>(TP1) Recognising the lack of a sustainability framework</i>	<i>Exploring the range of meanings and interpretations of the term sustainability and how people understand it in relation to their own practices.</i>
2	<i>(TP2) The idea of a mission statement as a shared framework</i>	<i>The idea of a mission statement is first suggested as an alternative framework to detailed descriptions and definitions of sustainability.</i>
3	<i>(TP3) A proposal for a mission statement that encourages students to think for themselves</i>	<i>The idea of the mission statement is expanded and developed into a mission statement for the campus; wordings are proposed, reviewed and revised.</i>
4		<i>Further revisions to the proposed CSS wording</i>
5	<i>(TP4) Determining a suitable title for the statement and seeking inclusion of all stakeholders</i>	<i>The concept develops from a "mission statement" to a "Campus Sustainability Statement". Draft wordings are agreed by the group and issued to all staff for comment and feedback.</i>
6		<i>No development action on the CSS</i>
7		<i>Feedback from wider staff received, selection of a particular wording option agreed by participants.</i>
8	<i>(TP5) Emphasising the importance of expressing commitment</i>	<i>The concept is further refined and commitment to action is made explicit through the inclusion of terms such as "committed to" and "endeavours" in the statement. The final wording is agreed for submission to management for consideration and adoption at a staff meeting.</i>

Table 3 Timeline and key events in the formation and development of the Campus Sustainability Statement

In the following section we use these five turning points as a framework to describe and analyse the development of participants' transformative agency, as it was observed during the intervention in the lead up to each turning point.

ELC Action	Quest. & Criticising	Analysis	Modelling		Examining	Implementation Reflection Consolidation	
Turning point	TP1 Recognising the lack of a sustainability framework	TP2 The idea of a mission statement as a shared framework	TP 3 A proposal for a mission statement that encourages students to think for themselves		TP4 Determining a suitable title for the statement and seeking inclusion of all campus stakeholders.	TP5 Emphasising the importance of expressing commitment	
TA Type							
Resisting			R.1 Mission statements are too corporate		R.2 Duplication of a mission statement		
Criticise	Cr.1 relating to lack of agreement on terminology Cr.2 relating to diversity of views Cr.3 the lack of a framework	Cr.1 relating to lack of agreement on terminology Cr.2 relating to diversity of views Cr.3 the lack of a framework	Cr.4 How the mission statements could help accomplish the aims. They should: express beliefs, have meaning, guide actions, be honest & realistic	Cr.5 The wording to make it reflective of the intention.	Cr.6 The title Cr.7 The lack of campus wide collaboration Cr.8 Mission statements as having little impact		Cr.5 The wording as not strong enough
Explicate		Ex.1 A mission statement					
Envision			En.1 A statement that is phrased in terms of student opportunities. En.2 The specific wording, initial draft	En.2 The specific wording of the statement, development of the options	En.3 An appropriate title. En.4 A collaboratively developed campus wide vision		En.2 The specific wording of the statement, agreeing the final wording.
Commit							Co.1 Committing to commit. Wording to signal commitment
Conseq. Action							
Session No	1	2	3	4	5	6	7
							8

Table 4 The development of participants' transformative agency mapped against the session timeline in the development of the Campus Sustainability Statement.

The manifestations of the various types of participants' transformative agency in relation to the development of the Campus Sustainability Statement, as observed during the intervention are mapped against the session timelines and presented in Table 4. To place the events in the context of the design intentions for each of the session, we include reference to the types of expansive learning actions for the overall intervention.

6.2 Recognising the lack of a sustainability framework

The focus of the first session in the intervention (subsequently running into session 2) was on questioning and criticising the existing practices on the campus. Doing so immediately resulted in a lot of discussions about sustainability terminology and how different terms are defined. It became obvious that there were different understandings and beliefs in the group about what sustainability is and how it should be dealt with in the HE context. Conversely, it also became apparent that there was a lot of interest in "sustainability" (howsoever defined) and that many of the participants were already carrying out sustainability related activities in their practices.

The first turning point identified in the intervention was a recognition that, while there was a lot of interest in and activity around sustainability, there was no formal framework to work with to build capacity on the campus.

The expressions of transformative agency that were observed in the lead up to this turning point are each, as we outline below, expressions of criticising. Given that the design of the session had been intended to support questioning actions (see Table 2), then finding such evidence is perhaps unsurprising. Yet it is noticeable that, at this stage, participants did not feel able to resist the direction of the intervention or suggest ways forward of their own. Instead, at this early stage, their agency was nurtured by allowing them to criticise a range of concepts—in practice, as it turned out, the target of

much criticism was the very notion of *defining sustainability*. Three expressions of transformative agency, all forms of criticising, dominated proceedings at this point.

6.2.1 Cr1: Criticising relating to the lack of agreement on terminology

One target of criticising, in relation to how the participants understood sustainability terminology, was evident from the first session, which started off with one of the participants asking:

“are we all starting with a common definition of sustainability?”

S1 Management participant A

This was the first of many engagements in the first two sessions where the participants problematised and also sought clarification regarding the issues of terminology and definitions. Such expressions attempted to raise the point that it would be difficult to begin the project without clarity on the key definitions that would be used.

6.2.2 Cr2: Criticising relating to the diversity of views.

It quickly became apparent that different participants had diverse views on what sustainability is and how it can be dealt with: whether through teaching practice and/or in programmes as a whole.

In Session 1, participants tended to build on expressions of Cr1 by articulating that they had personal views that were clear to them but unlikely to be shared by all others in the group. One participant, for example, observed:

*“...in terms of applying it to myself, I am aligned with environmental sustainability...
and there are things I teach specifically such as the idea of cultural
sustainability...traditions and crafts and the importance of the built heritage...”*

S1 Heritage lecturer B

Other participants, by contrast, suggested that they were focused on social or community aspects of sustainability:

“...we take the three strands environment, economic and community and I really think that if we were looking at the programme as a whole, a lot of it is around compassion rather than passion, and I think that is very much the social element or the community element.....and we try to include that in the whole programme”

S1 Social care lecturer A

Subsequently, participants came to explicitly criticise this diversity of views, and to notice that some views were irreconcilable with others:

“that could end up leaving you with some tension between irreconcilable concepts, between trying to teach business students, for example, sustainability, and trying to teach them a certain type of economics at the same time”

S2 Social Care Lecturer B

While the diversity of the participants’ views, and the associated lack of agreement on sustainability terminology and definitions were recognised in session 1 (S1), they came to be more prominently identified as problematic in session 2 (S2), when the participants started to seek common ground to agree on a shared understanding.

6.2.3 Cr3: Criticising the lack of a framework or formal structure.

The first expression of criticising practices (as opposed to definitions) directly related to the development of the CSS, was observed in session one; where participants acknowledged that, even though there was a lot of sustainability activity being carried out on the campus (including by participants themselves), it was occurring in the absence of any structured plan or framework. The

range of sustainability-related teaching activities was highlighted, as was the fact that they were independent of any formal institute framework, and this was acknowledged as problematic.

6.3 A mission statement as a shared framework

In session 2, many of the same issues that arose in session 1 reappeared and were discussed and debated again by the participants. Yet the intended focus for the session, as manifest in the task design, was on analysing why the situation was as it was, and, moreover, the participants were asked to imagine what a sustainable IoT might look like. Doing so resulted in the following episode of explicating—the first time that new potential had been identified in the intervention.

6.3.1 Ex1: Explicating the potential of a mission statement

The idea for the development of a mission statement, as something that could guide practice and provide a framework within which to work, arose in the context of the prevailing discussions about definitions of sustainability and the lack of an institutional framework. The idea was only mentioned in one exchange by the group during session 2, with the following extract an abbreviated illustration:

“...we felt that there should be a mission statementit would be useful, in that it would provide a framework, by which we are the individuals that drive it, and you are open to interpret that mission in terms of your own practices”

S2 Outdoor Education Lecturer B

After the session, during the process of inter-session analysis, the researcher-interventionist highlighted this concept as worth developing in later sessions. Since the mission statement idea was being discussed as potentially providing a framework, as something open to individual interpretation, as something individuals could drive, and as something that seemed to be an achievable outcome, it

was highlighted within the analysis at this point as a potential solution that might provide for a shared frame of action for sustainability.

6.4 A proposal for a mission statement that encourages students to think for themselves

Turning point 3, which was in many ways *the* pivotal point in the development of the CSS, occurred in session 3. As the following subsections elaborate, an initial—and robust—bout of resisting led to an oscillation between moments of envisioning and criticising.

6.4.1 R1: Resisting mission statements as corporate

At the start of session 3, the idea of a mission statement, which had only recently been put forward, was strongly resisted because of the perceived corporate nature of the term and the associated terminological and conceptual duplicity:

“..if we have a mission statement saying that we are committed to sustainability... how can you run a business programme on the campus? Or how can the campus fulfil its regional mission, which is to support “economic development” when development inherently means growth economics, which is not a sustainable concept”.

S3 Social Care lecturer B

Members of the group were resisting the use of a tool, which is strongly associated with corporate identity, to promote sustainability in a HE context. The resistance focused on a number of features of mission statements, such as their actual function (i.e., are they meaningful, or just purely emblematic public presentations?). Recalling earlier criticising, resistance was also encountered in relation to the need that such a statement would present for conceptual clarity (specifically regarding the concept of sustainability). Two examples were offered to illustrate this: how could an organisation that states

that it is committed to sustainability either run business programmes or fulfil its local and regional remit to support economic growth? Both of these undertakings, it was suggested, are based on the growth economics model, which is seen by some as being an unsustainable economic model.

After some preliminary exploration and discussion, the initial resistance was, to some extent, replaced with criticising what mission statements *are* (see below, section 6.4.3), which seemed a bid to react to these moments of resistance.

6.4.2 En1: Envisioning a statement that is phrased in terms of students' opportunities.

The first expression of envisioning was prompted by the first task set in session three, which asked the participants to develop a mission statement that the group could support. This focus on envisioning was driven by the researcher, who hoped that the group might be able to develop a statement that could be adopted in some way by the campus. It was hoped that it might be able to generate some form of conceptual alignment around sustainability among the participants.

The speech turn below occurred in the early part of session 3 and responded to the previous resistance expressed about mission statements:

*"I am not a fan of mission statements but it might be something that might focus the group, but the other side of it is, instead of saying we are one extreme or the other ...it's just to say that what we are offering students, is the ability **to look at things in a different way**, and not just in what could be the mainstream way, but enabling them to think for themselves and make a choice, and maybe in the future, make a decision, so we are not like, trying to convert them to one way or the other, but enabling people to make an informed choice".*

Green campus/Administration A

This proposal changed the focus of the discussion, which now became focused on what the participants could collectively offer the students (i.e., encouraging their critical thinking), rather than

the participants' own opinions or beliefs. The proposal received broad agreement from the participants on that basis, as the following extract demonstrates:

"I agree with that, what is good about that, is that it is more realistic, it's actually more accurately saying what we would do. It's not making a claim that we are going to be sustainable, or that we are going to commit ourselves to sustainability education ... we are not, but we could do that, it's more realistic and more modest.I suppose, this is as good as it gets.".....

....."We should be quite rigorous about our concepts and make sure that they are meaningful...now I think a modest one [Mission statement] makes perfect sense to me. Instead of a big mission we have a tiny little mission, with a really modest claim. Our claim is modest, but the mission is a dramatic concept... another contradiction, but it can also be a signal of aspiration"

Social Care lecturer B

This proposal, then, represented a pivotal moment in the development process. It provided a way to express an academic/pedagogical aspiration without either compromising values or committing to something that would have been considered unachievable by some of the participants.

6.4.3 Cr.4: Criticising how the mission statement could help accomplish the aims of the group.

It was only after the proposal to "look at things in a different way" was made that the language of resistance gave way, to be replaced by criticising: mainly manifest as critical commentary about the form the mission statement would take and whether this could achieve the aspirations of the group within the existing realities of the institution.

There were many individual instances of criticising observed which we categorised under this heading, including:

- Discussions of participants' beliefs and how these would be projected (some participants felt that, while the statement should be about what they believed in, it was also important to acknowledge that there were many different beliefs about sustainability, and these others should be reflected too);
- Expressions of feeling that the statement should have meaning that could guide definite actions if the prevailing institutional lack of coordination was to be overcome;
- Arguments that the statement should articulate a common purpose within the institution;
- Reiterations that any mission statement should be honest and realistic or risk not being taken seriously given the institution's existing priorities;
- Arguments that only a general and simple statement would stand any chance of gaining traction and therefore being effective.

Such instances proceeded from a tacit assumption that the mission statement idea was gaining traction in the group, and the attendant criticising involved jockeying to ensure that certain broad aims would be embedded in whatever mission statement was going to emerge. Earlier conversations in the project about the consequences of bottom-up initiative in the institution were referred to, and used to justify many of the points being made.

6.4.4 En2: Envisioning the specific wording of the statement

As a consequence of the preceding bouts of criticising, the development of precise wording for the statement came to be considered as very important by the participants. The development of that wording was observed in separate episodes of envisioning throughout the project, the first of which arose at this point in the intervention.

The development of *the initial wording* of the statement occurred in a two-step process, the first focussing on student engagement and second on the campus operations. It resulted in an initial draft, as follows:

“All our students will critically engage with sustainability in their programme of study. The campus will endeavour to make sustainability a core value of its operation.”

By the end of session 3, the draft of the statement contained two aims—a clear development from the initial proposal for a mission statement, which had referred only to student engagement. This development was the result of a discursive process that allowed the participants to explore what they felt was important about sustainability, and how it could be supported through the creation of a mission statement.

6.4.5 Cr5: Criticising how the statement wording would be understood.

Subsequently, criticising the specific wording of the statement was observed on two separate occasions. On each occasion, such criticism was made with regard to the prevailing situation in the institution, and doing so prompted the participants to propose slightly new wordings (which we categorised as further instances of En2).

6.5 Determining a suitable title for the statement and seeking inclusion of all campus stakeholders.

Once the idea of a mission statement had gained broad acceptance by the group, they turned their attention to refining it. Doing so, in particular, meant focussing on its title and what that meant for themselves and for the wider campus. This led to series of expressions of transformative agency which started out with resistance to the title “mission statement” and ended up with a concept whose new title acknowledged that the intended stakeholders included the wider campus staff. In terms of transformative agency, this is the first time that the group acknowledged and took responsibility for working and acting on behalf of staff from the campus as a whole.

6.5.1 R2: Resisting duplication of the term mission statement.

The second instance of resisting, like the first (R1), related to the very idea of a mission statement. Yet, this time, the basis of the resistance was that the Institute *already had a mission statement*. It was therefore felt that it would be inappropriate for the campus to develop its own mission statement or charter.

“The mission statement that is there, is institute-wide..... but what we have been trying to develop here is something that probably is specific for this campus...?”

S5 Researcher

“I’d agree with [Management participant B] that the [existing] mission statement is for the institute, so having separate mission statements for different campuses probably won’t have value for it, in terms of communicating it...”

S5 Management participant A

Such resistance served to foreground the idea that the group’s activities were oriented towards the campus, rather than the institution as a whole.

6.5.2 Cr6: Criticising the title.

In session 5, as a consequence of the above resistance to the idea of a mission statement (R2), the previously proposed statement was again discussed by participants, this time on the basis that the title would be unsuitable given the existing institutional situation.

“Is it a campus charter specific to sustainability, like a mission statement or a charter, is that a bit broad? I’d be a bit confused, which is the actual campus one? Very specific to sustainability and green...”

Social Care lecturer A

Such criticising ultimately led to the envisioning of a new title.

6.5.3 En3: Envisioning a more appropriate title

Much of the time spent on envisioning at this point involved exploring what the participants wanted the statement to represent and, therefore, considering what the title should be to reflect this intention. The proposed title went through a series of iterations. The term 'charter' had been mentioned in a previous session, and one participant asked if the statement might be a "campus charter" specific to sustainability.

"I think a charter (rather than mission statement) might be one that might reflect the group, you know, it's meaningful rather than a mission."

S5 Management participant A

Members of the group subsequently explored series of possible options, including a "charter for sustainability" and a "campus sustainability charter" (a momentarily important distinction), and "a sustainability proclamation". It was eventually decided that the group should put forward a "sustainability statement for the campus", subsequently shortened to "Campus Sustainability Statement". Doing so seemed to capture the advantages of the statement that had been proposed earlier, while avoiding the pitfalls identified in R1.

6.5.4 Cr7: Criticising the lack of campus wide collaboration.

Proposing the concept of a "Campus Sustainability Statement", however, was consequential for how the group perceived themselves and related the change initiative to existing institutional practice. In sessions 4 and 5, a number of participants commented on the fact that the group was not representative of the whole staff on the campus. The group, it was suggested, could not impose a new mission statement for the campus without replicating the existing pattern of bottom-up initiative which failed to garner engagement from other stakeholders:

"We can't as a self-selecting group say, by the way, so that all the rest of you know, we have decided that the new mission for the campus is X.....people will likely say whoa what is this? We can't do it that way."

S4 Social Care lecturer B

In session 5, this was again articulated as criticising, as follows, (see also 6.5.5 En.4.)

"I think Judd had more points about this the last time, about his concern about it being a mission for the campus, as opposed to not everyone would subscribe to that"

S5 Management Participant A

6.5.5 En.4: Envisioning a collaboratively developed campus wide vision.

In session 5, in response to those expressions we have categorised as Cr7, it was envisioned to get input into the CSS from wider campus stakeholders. A number of options for sharing the content of the statement with the staff were explored, including organising a face-to-face staff meeting, creating a "sharefile" on the intranet of the institution, and sending an email to all staff. One such contribution was set out as follows:

"So maybe we could set up a sharefile, put it there for people to contribute to, and close it out maybe at a wider meeting. Just be a long enough time for people to be able to think about and understand, and, I suppose, they might say what's the impact with that, to understand what we're proposing there, what we're trying to take forward, and that they have a chance to ... Just whatever format works for them to contribute or voice concerns in that way. Sometimes, at staff meetings people might not like to stand up and speak up about something in front of a whole group..."

Management Participant A

6.5.6 Cr8: Criticising of mission statements as having little impact.

Another expression of criticising that arose at this point reiterated earlier opprobrium at the very notion of statements. In particular, one of the participants, who had previously been through numerous strategic review processes where institutional statements had been developed, expressed his concern that even though he thought the proposed statement was positive, in his experience, statements do not necessarily have much impact or elicit strong responses from staff members:

*"I think it's a lot better than the amount of spin-out meetings we've had about making a mission statement for this college, which have gone on and on, I've gone through about five mission statements for this college at this stage so....-
.....They've been put throughyou knowwe have a mission statement appearing, and then..... life goes on as normal, so, I'd be surprised if you get many big dissenters to the mission statement."*

IT Lecturer A

That it took several sessions of discussion on the topic before anyone commented on the fact that the institute already had a mission statement is perhaps proof of this point! Such criticising, and the discussion that it prompted, served in this instance to reinforce a decision that had already gained traction: that it would be important to try to get input from a wider set of institutional stakeholders about then proposals being developed by the group.

As a consequence of these discussions the proposed wordings, along with a short overview of the project and its aims, were shared via email with all of campus staff.

6.6 Emphasising the importance of expressing commitment

The final turning point observed in the development of the CSS occurred in the last session and was because of a further episode of criticising (similar to those under Cr5 above) aimed at questioning the

level of commitment expressed in the existing wording of the statement. That criticising led to envisioning (type En2) of a new wording. On the surface, the changes might appear to be modest and subtle, yet they are significant in terms of agency because of what they represent in terms of the *expression of commitment* that they indicate.

In session 8, the participants considered whether the wording was simply not 'strong' enough to express the sentiment that they wished to communicate:

"Sorry, can I just make one comment on it...? Just, do you want to go with 'endeavours' or something a bit more..... I suppose, it softens the ability that 'endeavours to embed'. Whereas if you said 'it embeds sustainability' is that too pushy?"

S8 Nursing Lecturer

This led to a short discussion about the detail of wording and resulted in the final expressions of envisioning, when the wording of the statement was changed from:

*"The Mayo Campus **endeavours to** embed sustainability into the core of its activities and operations. We **aspire to** provide a teaching and learning space that promotes critical engagement with sustainability."*

to

*"The Mayo Campus **is committed** to embedding sustainability into the core of its activities and operations. We **endeavour to** provide a teaching and learning space that promotes critical engagement with sustainability."*

6.6.1 Co1: Committing to commit.

During the intervention, there were many expressions of committing observed, such as the formation of a number of sub-committees, however only one episode was related to the development of the

CSS specifically. We argue that “committing to taking concrete actions” was demonstrated when the proposed wording of the statement was changed in the final session to include the words, “committed”, and “endeavours”. These changes, in relation to campus operations and teaching and learning activities, were intended as an unequivocal expression of commitment by the participants to taking concrete, new actions, in relation to embedding sustainability on the Campus.

While this manifestation is aspirational and somewhat vicarious (in that the CSS had yet to be approved and adopted by the campus staff, and then enacted by them, rather than just by the participants) we believe that it demonstrates a commitment to taking concrete action in the future so long as the CSS is eventually approved and adopted. The following quotations evoke the wider enthusiasm of the participants for including the new words and their meaning:

“Yeah, ‘commits.’ There’s a commitment, whether people act on it or not, that’s why ‘commit’ would be better.”

S8 Outdoor Education Lecturer A

“I prefer ‘committed’ of course..... I far prefer ‘committed’.”

S8 Environment Lecturer

6.7 Consequential actions

The final wording of the mission statement was agreed at the last CL session and so expressions of consequential actions were not observed during the project workshops. Many consequential actions were taken after the process, most of which were led by participants in the research-intervention, but these fall outside the dataset whose analysis forms the basis of this chapter.

7.0 Discussion

Let us now step back and consider what these findings tell us about stakeholder agency in higher education sustainability initiatives.

We have outlined, from the beginning of the chapter, that pursuing sustainability-related change within HEIs is viewed as increasingly urgent—a moral imperative underpinned by the requirement to maintain credibility with external stakeholders and to fulfil the educational remit of the institution. The existing literature, for good reason, has focussed on the problematic nature of many change initiatives, and there has been some debate on the different kinds of problems encountered by ‘top-down’, ‘bottom-up’ and ‘middle-out’ approaches. Yet such literature has largely remained blind to process and, therefore, has failed to appreciate how stakeholder agency is expressed in different ways and at different times.

One way in which our findings contribute, therefore, is in showing that the ‘capacity-building’ element of these institutional change initiatives is dependent upon the extent to which participants are able to define the problems being addressed for themselves and guide the direction of the outcomes that are being developed. As we have demonstrated, the eventual outcome of the Campus Sustainability Statement arose initially from a critical discussion between stakeholders about the meaning of the term sustainability—a discussion in which it became clear that agreement would not be forthcoming. Had the lack of agreement been taken as a sign that the intervention was becoming directionless, then a decision could have been taken to enforce a decision or close down the project. Instead, the disagreement and passion of the group were harnessed, even at the risk of frustrating some of the stakeholders, and the urge to impose tidy resolution was resisted. As a consequence—and through a series of intervening turning points—the concept of the Campus Sustainability Statement was developed by the participants themselves. While this chapter has focussed on the Campus Sustainability Statement in particular, similar narratives could have been unfolded about the various other outcomes that were generated from the wider initiative. We contend that the key distinction

between sustainability-related change initiatives within HEIs, therefore, should be seen not so much in terms of a categorisation of the institutional origins of the initiative (such as ‘top-down’) but, rather, in terms of how time and resources are provided to support and nurture an *ongoing inquiry* by the participants concerned. A similar point could be made concerning the tendency—mentioned in the Introduction—to categorise initiatives based upon which institutional functions they focus on. Had our project commenced from the starting point that it was focussed on “educational provision”, for example, then many of the actual outcomes that were developed would have been judged, very quickly, to have been out of the scope of the intervention, to the detriment of the influential and coordinated set of strategies that did emerge from the project as it unfolded.

Our literature review also highlighted how prominently the issues of “barriers” and “challenges” are discussed in the literature on sustainability-related change initiatives. It is worth emphasising that many of the barriers and challenges described in that literature concern issues that were encountered fairly directly in the project we have described in this chapter. Take, for example, the widely acknowledged issue that institutional stakeholders lack an agreed definition or understanding of sustainability. That “challenge” was prominently encountered during this project, and indeed how it was overcome has been documented above at considerable length. Our project also encountered problems with disciplinary communication and collaboration, pessimistic views about whether the institution was really committed to taking action, and lack of resourcing. What this chapter demonstrates, however, is that opening up such issues to open debate and critique can be hugely productive. That approach contrasts sharply with how these challenges are typically discussed in the literature, where agreeing definitions is seen as a good way of avoiding confusion, clarity of communication is seen as essential for generating action, and resourcing is seen as something that should be agreed at the outset of a project. Such impulses speak to a tendency to try to over-prescribe the remits of projects and over-determine their directions. The approach we document here, by contrast, demonstrates the productivity of providing tasks (and supporting resources) which allow

participants to explore their differences; of using mutual disagreement as a springboard for creativity; and of generating ideas (such as that for a research centre) even where funding is not yet in place and where acquiring it may seem ambitious.

Finally, our chapter makes a distinctive contribution to the issue of stakeholder engagement. As our literature review documents, engagement is seen as an important issue: due to the moral and ethical responsibilities of HE stakeholders, and the discourse that HEIs are training future leaders who might take forward sustainability agendas outside the sector as well as within their institutions. Yet the existing literature typically considers such engagement in ways that are individualistic and reflective of traditional divisions of labour existing within universities. Senior academics, for example, are positioned as thought-leaders; those from particular disciplines set up to find solutions; and administrators positioned as facilitating awareness and supporting others. Our approach, by contrast, highlights the centrality of building a collective agency—a transformative agency—as a core part of the capacity building that the literature already recognises as a key element of educational change. Individuals were engaged as people, rather than merely as employees, and encouraged to treat the project’s meetings as a safe space where they could talk in ways that did not respect prevailing institutional ranks, roles and divisions. People adopted new roles within the project, and subsequently changed their views and those roles as the initiative developed; seeing that their resistance and criticism had a good chance to change the direction of the project encouraged people to step up and take ownership of the new ideas that were generated. Such interactions are increasingly challenged where HEIs come to operate in ways more reminiscent of corporations, but such ‘relatively democratised’ knowledge production was central to the initiative and can be taken to explain the repeatedly encountered willingness to overcome obstacles and engage with solutions at length.

8.0 Conclusion

This chapter has reported on a Change Laboratory research-intervention designed to foster sustainability-related capacity building among the staff of a small, third-level, multidisciplinary HEI campus. The intervention sought to explore how sustainability could be embedded in the practices of staff across the campus, through a process in which the creation of new concepts and the development of the participants' transformative agency were dovetailed.

The process resulted, among other outcomes, in the development of a Campus Sustainability Statement (CSS), which was subsequently adopted by staff and campus management and launched at a high-profile public event. The CSS has subsequently helped influence and reinforce the development of a number of other sustainability related initiatives on the campus, many of which are led by members of the project described in this chapter.

The underlying study demonstrates the potential that the Change Laboratory methodology has in relation to exploring how sustainability can be embedded in a HE setting, and how it can produce tangible results which can have a significant impact on practice. This chapter has highlighted the potential and benefits of harnessing stakeholder input (and enthusiasm) within a structured, collaborative development processes, where the participants are allowed to identify, examine and iteratively re-envisage the underlying issues and develop their own solutions.

In relation to the applicability of the Change Laboratory as a methodology for designing, enacting and exploring sustainability-related change initiatives in HE, we propose the following conclusions:

1. The Change Laboratory is an effective methodology for the development of sustainability-related practices and initiatives in Higher Education settings.

2. The process promotes robust, open and frank discussions and stimulates resolution of the issues that may arise. This is essential when dealing with contentious and emotive subjects where participants have a wide range of potentially opposing views.
3. The capacity building aspect of the process is crucial, and is nurtured where people feel that they are genuinely heard—even if their contributions are uncomfortable and contentious.
4. Terminological issues, whether due to beliefs or disciplinary background, can be overcome through the structured collaborative development of new ideas and concepts understood as bespoke to the institutional setting.
5. The process facilitates cross and trans-disciplinary collaboration, which is essential for the development of successful sustainability initiatives
6. The process can be used to harness participants' existing enthusiasm about sustainability and address scepticism about institutional practices and regimes.
7. The process develops participants' willingness to express commitment and pursue objectives.

Based on the results of this study we believe that there is significant scope for further such projects in other institutions where staff and management are interested in developing sustainability-related practices and activities.

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