Transforming Education for Sustainable Futures

November 2020

Mobilising capacities for *Transforming Education for Sustainable Futures:* Opening spaces for collaborative action and learning

TESF Background Paper

1. Introduction

This background paper introduces our plans for collaboration, learning and action within the *Transforming Education for Sustainable Futures* (TESF) research network. It sits alongside others addressing the conceptual foundations of TESF (Tikly et al. 2020), the role of education for sustainable livelihoods (McGrath 2020) and cities (Parnell & Bazaz, forthcoming), the development of values-based indicators for SDG 4.7 (Brockwell et al. forthcoming), co-production research methods (Sprague & Cameron, forthcoming), and other areas relevant to our work. At the time of publication (November 2020) the COVID-19 pandemic is leading many of us to experience increased vulnerability, precarity and uncertainty. In this shifting landscape, progress towards reorienting education systems for more socially and environmentally sustainable futures requires us to focus on processes of collaboration, learning and adaptation in order to capitalise on distributed capacities and emergent windows of opportunity. As we outline in this paper, *mobilising capacities* is key to these efforts.

Transforming education for sustainable futures requires coalitions and collaborations which span traditional boundaries – academic, professional, geographical and generational. Sustainability is not something which can be discovered by scientists and disseminated through policy and practitioner networks, but something which we ourselves must create through processes of collective 'deliberation, questioning, negotiation, and experimentation' (Wals 2019, p.62). This requires opening spaces for examining entrenched unsustainable patterns, habits and routines which have become 'frozen', and engaging in collective action which includes experimenting, making and learning from errors, and celebrating progress towards more sustainable alternatives.

The significance of *mobilising capacities* for achieving the network's aims emerged through the course of our activities. The key elements of this can be summarised as follows:

- *Transforming Education for Sustainable Futures* requires mobilising capacities in the form of knowledge, skills, agency, relationships and other valuable resources which are ***distributed*** across communities, organisations, professions and other stakeholder groups.
- From a holistic or ecological perspective, capacities are ***relational***, emerging through social interactions and relationships-in-action, rather than being individual properties or attributes.
- Mobilising capacities which are distributed, and fostering capacities which are relational, requires reaching out and bringing together diverse groups to pursue shared goals within a wider coalition or ***network***.
- This requires creating, or opening up, ***spaces*** for dialogue, deliberation, experimentation, decision-making, developing relationships, and collaborative inquiry, action and learning.
- Across these spaces, intentional structures and processes can ***support the learning*** of individuals and groups within the network, and facilitate learning by the network.

This background paper reports our experiences to date and aspirations moving forward for mobilising capacities for TESF. The following section presents our conceptualisation of capacity and capacity mobilisation. After this we elaborate on the case for collaboration in terms of sustainability and research for transformation. We then consider the principles which inform our partnerships, and the spaces for collaboration, action and learning within the network. The final section outlines the monitoring and evaluation processes we have established to support learning and adaptation in the network.

2. From deficit to asset-based views of capacity

Epistemic justice and 'capacity building'

A deep understanding of capacity within an international research programme such as this (see Tikly et al. 2020) requires attention to broader power relations and how these shape notions about what capacity is and who has it. Epistemic justice theory has been used to account for ways in which an individual's credibility as a knower can be shaped positively or negatively by aspects of their identity, such as gender, race, caste, class and geographical location (Fricker 2007; Batra 2020; Koch 2020). How might factors such as geographical location affect perceptions of someone's capacity? The terms 'Southern' and 'Northern' which we are using within the network in many ways reflect the same problematic Eurocentric assumptions which are embedded in terms such as 'first world' and 'third world', 'developed' and 'developing countries' (Skupien & Ruffin 2020). These false dichotomies carry associations of knowledge, expertise and capacity on one side, and ignorance, challenges and incapacity on the other. These erroneous assumptions provide an unjustly inflated sense of Northern capacity, while simultaneously devaluing the capacity of Southern actors and institutions (Koch 2020; Walker & Carmen Martinez-Vargas 2020). It is important to be mindful of these connotations, so that our approach to mobilising capacity for TESF is not hindered by these false and harmful views.

Towards mutual capacity development

At this juncture it is worth referring to the explicit aims of the UK government's Global Challenges Research Fund (GCRF), which is the principal financial sponsor of TESF:

> *[GCRF] promotes meaningful and equitable relationships between UK research institutions and developing country [sic] partners…[It] aims to build UK and global development research capacity and capability by forging strong and enduring partnerships between academic communities in the UK and the Global South and by enhancing the research and innovation capacity of both. (GCRF 2017, p.1-2)*

This statement provides welcome recognition of South-North research collaborations as sites of *mutual* capacity development; however, evidence shows that this is only a possible rather than a necessary outcome of engagement in such partnerships (Barret et al. 2014; Dean et al. 2015; Ishengoma 2016; Grieve & Mitchell 2020; Kontinen & Nguyahambi 2020). Given the colonising tendencies that characterise many aid and development-oriented activities (Jayawardane 2019; Sriprakash et al. 2019), it is important to give serious consideration to what 'mutual capacity development' might look like and how it may be pursued in this context.

Work by globalisation and postcolonial theorists is helpful for this purpose. Appadurai's (1999) notions of 'weak' and 'strong internationalisation' have been used by others to explore research capacity development within international partnerships (Thomas 2018). For Appadurai (1999), **weak internationalisation** is a one-way process of learning, whereby peripheral participants are inducted into a status quo governed by Eurocentric norms. Such a process broadens participation in Western social science practices without informing or enriching this mode of knowledge production. As such, weak internationalisation would preclude significant learning for the Northern institutions involved in TESF and is not a basis for mutual capacity development.

Conversely, **strong internationalisation** (Appadurai 1999) involves generative encounters between different epistemic traditions which can enrich global research practice by subjecting existing norms to critical scrutiny. This occurs through a process of intercultural dialogue, whereby 'scholars from other societies and traditions of inquiry' share alternative systems of knowledge production (ibid., p237). In this process epistemological diversity is an asset (rather than a deficit) which can help to address gaps and parochialisms in Eurocentric perspectives and practices. The value of such an approach has been emphasised in decolonial scholarship on the pluriversity. As Mbembe (2016) explains,

> *at the end of the decolonizing process, we will no longer have a university. We will have a pluriversity….A pluriversity is not merely the extension throughout the world of a Eurocentric model presumed to be universal and now being reproduced almost everywhere…[It] does not necessarily abandon the notion of universal knowledge for humanity, but… embraces it via a **horizontal strategy of openness to dialogue among different epistemic traditions**. To decolonize the university is...therefore to reform it with the aim of creating a less provincial and more open critical cosmopolitan pluriversalism – a task that involves the radical **refounding** of our ways of thinking and a transcendence of our disciplinary divisions. (Mbembe 2016, p.36-7, **emphasis in original**)*

As described above, strong internationalisation suggests a promising, if hypothetical, path towards mutual capacity development. But what are the practical implications of this for capacity development within TESF? Kontinen and Nguyahambi (2020) propose a framework for conceptualising three levels of institutional learning in the context of international South-North research partnerships. Their framework captures many of the nuances and also the serious challenge of the kind of transformative learning we envisage.

- *Type 1* institutional learning is a process of weak internationalisation which reproduces the status quo: network participants develop knowledge and skills consistent with the existing inequitable norms of global knowledge production. For example, Southern institutions learn to apply data collection techniques developed in the North; Northern institutions strengthen their capacity to administer large-scale international research programmes.
- *Type 2* institutional learning involves not only developing capacities in line with dominant norms and practices, but actively challenging the status quo by critically reflecting on the values, assumptions and inequitable power relations which underpin such international partnerships. In attending to differences in perspectives, priorities and power relations, Type 2 institutional learning is an example of strong internationalisation.
- *Type 3* institutional learning involves a fundamental transformation within and between institutions themselves, whereby the assumptions implicit in terms like 'development' or 'Southern' no longer hold sway. Kontinen and Nguyahambi (2020) suggest that Type 3 learning is rare or non-existent in such partnerships: '[it] would mean not only changes in institutional relationships but also in the principles of research and knowledge production.' (p13) Strong internationalisation, we would argue, is a necessary condition for this type of transformation.

Within the aims and resources of the TESF programme, Type 2 institutional learning is a promising focus for our efforts. In seeking to disrupt the status quo and to uproot normalized patterns, relationships and structures that are considered unsustainable, this can be characterised as transgressive learning (Lotz-Sisitka et al. 2015). We return later in the paper to the details of our approach to partnership working (Section 4) and processes for critical reflection and learning (Sections 5 and 6).

Capacity as a relational property

In line with decolonisation discourse and the critique of the commodification of knowledge whereby knowledge becomes something that can be extracted, packaged, possessed and exchanged or even traded, the TESF programme takes on a more relational approach to capacity (Faulkner et al. 2018). A relational approach to capacity and competence implies that a capacity is an outcome of a relationship-in-action. It emerges in a particular situation where that capacity is needed and is triggered by a combination of the task at hand, the other humans (and non-humans for that matter) as well as materials that affect the situation, and the qualities and capabilities a person brings to the situation. From this perspective, capacity is not something one can 'possess'. This has implications for capacity mobilisation - the question is not so much how do we teach, train or even develop capacity in people, but rather, *how do we create spaces and conditions that increase the likelihood of capacities emerging, and what kinds of heuristics and tools can support this?* These issues are picked up in Section 4.

To summarise, our approach to capacity mobilisation within TESF is informed by Appadurai's notion (1999) of strong internationalisation and scholarship which highlights the value of articulating and negotiating differences in priorities and perspectives as a means of overcoming global inequities in knowledge production. In bringing together divergent academic, professional, geographical and other communities, TESF provides opportunities for generative dialogue between different epistemic traditions. These are *opportunities* – possibilities, whose fulfilment requires anticipation and planning, and an attitude of epistemological humility and receptiveness to learning. This requires eschewing a deficit-based view of capacities in favour of an asset-based view (Mathie & Cunningham 2009) which proceeds from the recognition that *capacities for TESF already exist* in individuals and their communities in the form of values, knowledge, skills, agency, relationships and other resources. Lastly, capacity is viewed as a relational property that emerges in a specific context where people are trying to bring about change. Its emergence is highly dependent on the quality of the relations that exist between all actors and materials involved in that situation and the availability of the right tools and support available for the task and context at hand.

3. The case for collaboration

The case for collaboration for transforming education for sustainable futures proceeds from two distinct but interrelated issues – the first, relating to the nature of *sustainability* itself, which calls for collaborative inquiry and action; the second, relating to *transformation* or real-world impact, which involves strategies for political influence.

Multi-stakeholder partnerships for sustainability

Transforming education for sustainable futures cannot be achieved by individuals working in isolation; it requires collaboration across different stakeholder groups, or 'multi-stakeholder partnerships' which span traditional boundaries – occupational, geographical and generational (Brouwer & Woodhill 2016). This is because sustainability is nothing more or less than a social construct (Wals 2019), and understanding what education for sustainability looks like in different contexts of practice requires drawing on perspectives, knowledge and resources which are distributed across different sectors – government, civil society, science, business and education.

For this reason, TESF is intentionally bringing together stakeholders who are likely to have different backgrounds, values, perspectives, priorities, knowledge and experiences in order to engage in a creative and transformative/transgressive journey that seeks to re-orient education systems towards sustainability (for example, see Box 1). Critical in this 'bringing together' is that the spaces in which people meet allow for relations and connections to form, so that people are open to listening to each other and capable of seeing the world through their eyes. This openness to others also invites the introspection needed to elicit and, indeed, question one's own often implicit assumptions and frames of reference, in order to create room for new perspectives and actions.

Sustainability requires that people working on a common challenge form a learning system in which they can learn *from* and *with* one another, and collectively become more capable of withstanding setbacks and dealing with insecurity, complexity and risks (Wals et al. 2009). Such learning requires that we not only accept one another's differences but are also able to put these to use. A relational view of capacity-building focusses on creating the conditions and spaces that allow for people to develop strong relationships with the necessary commitment and social cohesion (Sol et al. 2013). Whether or not a system can make use of diversity and can deploy conflicts and tension constructively (largely) depends upon the available solidarity or social cohesion between people.

Box 1 Stakeholder groups participating in TESF engagement events

- Key policy makers in Government ministries and departments
- Teachers and teacher educators
- Representatives of NGOs/CSOs and other grass roots organisations representing historically marginalised groups
- Representatives of key multilateral agencies and regional NGOs/CSOs including country and regional offices of UNESCO, ADEA, FAWE, etc.
- Researchers based in HEIs working on topics germane to our work (e.g. environmental science, indigenous knowledge systems)
- Representatives of other relevant research networks

Capacity to respond to complex and wicked challenges – be it dealing with power inequity, uncertainty, lack of resources – emerges from a healthy learning system. A healthy learning system generates a certain degree of trust and safety, so that people will more easily open up to one another and are less frightened of being held accountable for 'errors' or alternative views that disrupt the normal. Moreover, a healthy network is resilient. Opposites and differences, which inevitably manifest themselves in a process of transformation, do not result in a group falling apart or in the stagnation of the learning process but instead will trigger reflection as opposed to impulsive (re)actions.

Multi-stakeholder partnerships for transformation

The second, albeit related, reason for working through multi-stakeholder partnerships is more political in nature. An important rationale for involving representatives from government, civil society, academia and business is because change requires concerted action across these groups. As Brouwer and Woodhill (2016) observe:

> *[although] no one group can bring about change on its own, the power of one group can be enough to block the actions of others (p4)*

These considerations highlight the importance of *how* research is conducted (as much as its substantive focus), and the need for fostering relationships, trust and ownership beyond the academy. Indeed, there is growing recognition that these features are common to research which achieves real-world impact on education policy and practice (Oliver & Cairney 2019; Georgalakis & Rose 2019).

In supporting co-produced research (Sprague & Cameron, forthcoming) through multi-stakeholder partnerships, TESF seeks to embed throughout our activities the conditions for *transformation* or research impact. Indeed, TESF itself is conceived as a kind of transnational research and advocacy network. In discussing the significance of transnational advocacy networks (TANs) for political change, Keck and Sikkink (1999) note that TANs are '[m]otivated by values rather than by material concerns or professional norms' (p89). TANs are characterised by:

> *fluid and open relationships among knowledgeable, committed actors (individuals and organisations). These relationships span nation-state boundaries [and]…exist to promote principled causes, ideas and values. They exist to change international policy as well as make these changes real in the day-today lives of ordinary people. (Ball 2012, p29)*

They provide a network of relations for sharing knowledge and information, and employ a range of strategies for achieving influence, including:

> ***information politics****, or the ability to move politically usable information quickly and credibly to where it will have the most impact;*
> ***symbolic politics****, or the ability to call upon symbols, actions or stories that make sense of a situation or claim for an audience that is frequently far away;*
> ***leverage politics****, or the ability to call upon powerful actors to affect a situation where weaker members of a network are unlikely to have influence; and*
> ***accountability politics****, or the effort to oblige more powerful actors to act on vaguer policies or principles they formally endorsed. (Keck & Sikkink 1999, p95)*

By working through multi-stakeholder partnerships, TESF seeks to capitalise on each of these mechanisms for achieving social change.

4. Partnership working

This section presents our approach to partnership working within TESF, starting with a discussion of the principles underpinning relationships within the network, followed by a case study of this 'in action' with reference to the participative process which led to the development of the *Call for Proposals*. The section concludes with a set of reflexive questions to support onward planning and decision-making.

Principles for partnerships

Since sustainability is an emergent property of collaborative action, inquiry and learning, this necessarily places collaborations, coalitions and partnerships at the heart of transforming education for sustainable futures. Parties entering such joint endeavours necessarily bring to the table different perspectives, interests and agendas. Although this is to be welcomed, how can legitimate differences in perspectives, values and priorities be negotiated in practice? Wals (2019) proposes that spaces for such work should incorporate, as a minimum, the following elements:

- Participation minimally distorted by power relations
- Pluralism, diversity, and minority perspectives
- Deep consensus, but also respectful disagreement and differences
- Autonomous and nonconformist thinking, self-determination, and [recognition of contextual differences]…(culturally, politically, socially, economically, and ecologically) (p62-63)

In the context of international research partnerships, the first of these is particularly problematic given the global dynamics discussed earlier (Section 2) and the evidence over many years that such relationships have often reflected and reproduced power asymmetries, particularly with respect to geographical location (Barrett et al. 2011; Ishengoma 2016), but also in relation to gender (Asare et al. 2020) and occupational groups (Fransman & Newman 2019). Recurrent concerns have included Northern-based researchers' disproportionate influence over the agenda-setting and research design process; management of the budget; and authority over others (Carbonnier & Kontinen 2014; Bradley 2017; RRC 2018). This has led, in some cases, to the inequitable division of labour and benefits, on issues such as publications and first authorship (Asare et al. 2020).

To redress these concerns, guidelines for equitable research partnerships have been developed over the years, two of which are reproduced here (Boxes 2 and 3). The first was produced by the Swiss Commission for Research Partnerships with Developing Countries (KFPE) (Stöckli et al. 2012), which has gone through several iterations since it was first printed in the 1990s. The second was developed by the UK's Rethinking Research Collaborative (RRC 2018) through broad consultation of different stakeholder groups around the world (including academics, policy actors, practitioners, civil society groups and others) with funding from GCRF.

Box 2 – *A Guide for Transboundary Research Partnerships: 11 Principles* (KFPE)

1. Set the agenda together – reach mutual agreement on the meaning and the purpose of work; joint development of research questions, approaches and methods
2. Interact with stakeholders – involve potential users of research findings in the research process from the earliest stages so that they can inform the research foci/questions and participate in research activities, as appropriate
3. Clarify responsibilities – effective partnerships rely on 'each partner contributing what they are particularly skilled in doing' (ibid., p6); dividing work in this way requires clarifying and assigning the responsibilities of different partners, and establishing rights and obligations
4. Account to beneficiaries – ensure accountability to relevant stakeholder groups including potential beneficiaries, in addition to the funders
5. Promote mutual learning – capitalise on diverse knowledge within the partnership by embedding structures and processes for dialogue and the ongoing monitoring and evaluation of achievements
6. Enhance capacities – focus on strengthening the long-term institutional capacities for all partners (including those in the North)
7. Share data and networks – Work towards the transparent and unrestricted flow of information between partners
8. Disseminate results – ensure that learning is shared 'in forms that enable potential users to find, understand, and use them' (p11); translate outputs into appropriate languages and formats for different target audiences; 'insist on dissemination beyond Northern libraries' (ibid.)
9. Pool profits and merits – ensure all partners receive a fair distribution of benefits, such as those resulting from authorship and publications
10. Apply results – incorporate implementation/application phases into the research process; withstand pressure from funders to produce quick results rather than relevant outcomes
11. Secure outcomes – establish long-term targets for sustainable institutional research capacity development

Source: Adapted by the authors from Stöckli et al. (2012, p4-14)

Box 3 – *Principles for Promoting fair and equitable research partnerships to respond to global challenges*

1. **Put poverty first.** Constantly question how research is addressing the end goal of reducing poverty through better design and evaluation of responsive pathways to development impact.
2. **Critically engage with context(s).** Consider the global representativeness of partnerships and governance systems and commit to strengthening research ecosystems in the global South.
3. **Redress evidence hierarchies.** Incentivise intellectual leadership by Southern-based academics and civil society practitioners and engage communities throughout.
4. **Adapt and respond.** Take an adaptive approach that is responsive to context.
5. **Respect diversity of knowledge and skills.** Take time to explore the knowledge, skills and experience that each partner brings and consider different ways of representing research.
6. **Commit to transparency.** Put in place a code of conduct or memorandum of understanding that commits to transparency in all aspects of the project administration and budgeting.
7. **Invest in relationships.** Create spaces and commit funded time to establish, nurture and sustain relationships at the individual and institutional level.
8. **Keep learning.** Reflect critically within and beyond the partnership.

Source: RRC (2018, p2)

Both sets of principles seek to disrupt the status quo by challenging power asymmetries in line with Type 2 institutional learning (introduced in Section 2). Common features include the need for collective deliberation and decision-making over the focus and design of research; the involvement of stakeholders outside academia; and a commitment to long-term relationships and learning. In the following section we demonstrate how these principles have informed activities within the network with reference to the development of our *Call for Proposals*.

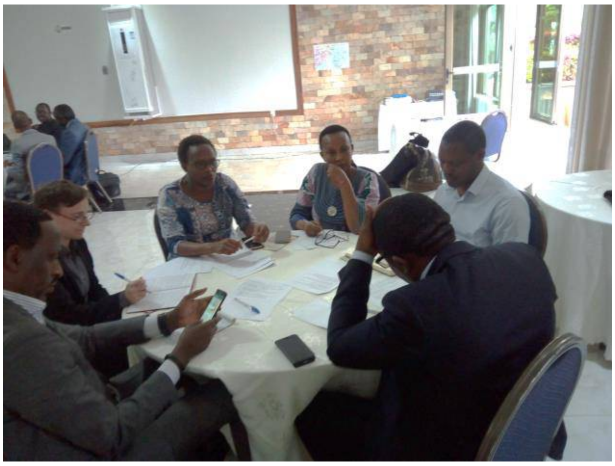
Case study: collaborative development of the TESF Call for Proposals

TESF is a 'Network Plus', an international research network established with sponsorship from a UK government agency, which is charged with funding research and capacity development projects in Somalia/Somaliland, Rwanda, South Africa and India (Tikly et al. 2020). To invite requests for funding, TESF will be issuing a Call for Proposals (CfP) towards the end of 2020.

A CfP is a means of asserting a research agenda by specifying the focus and sometimes even the modalities of research (Grieve & Mitchell 2020). That being the case, how has TESF approached the CfP in a way which reflects our commitment to the principles of equitable partnerships outlined above?

> The process of developing the CfP involved multiple stages of consultation, collective deliberation and decision-making stretching back to the initial drafting of the TESF proposal in early 2019. At that time, Professor Leon Tikly hosted a series of meetings on and offline for colleagues from diverse disciplinary backgrounds at the University of Bristol and others outside the organisation, including colleagues in Africa, Asia, Europe and the Americas – for the purpose of gathering ideas for a GCRF bid. These were developed into an initial proposal, which – as a collaborative online document – went through several iterations with inputs from all members of the TESF leadership team.
>
> Writing the proposal collaboratively involved airing differences in priorities and perspectives within the team. Disagreements over the substantive foci of the bid, the terminology, framing and proposed activities were manifested in track-changes and comments throughout the evolving document. For example, an early iteration of the proposal identified an objective of the network as: '[To] co-produce evidence urgently needed to transform education and training systems so that they become drivers of socially and environmentally just development.' In the margin, one participant commented that an emphasis on *evidence* reflected a narrow view of the potential contributions of research. This prompted a shift in terminology throughout, from the need for 'evidence' to the need for 'evidence and arguments'.
>
> Following the award of the grant to TESF (November 2019), a series of 'engagement events' were held in the hub countries. These took place in-person in Rwanda and South Africa (March 2020) and – due to the Covid-19 pandemic – online in India, South Africa, Somalia and Somaliland. Participants at

these events included national and regional-level policy actors from offices of education, urban planning and environmental affairs; practitioners from schools and other educational institutions; representatives from NGOs and civil society organisations; university-based researchers, and others. In each case, participants were invited to share their priorities for TESF-funded projects in their national context.



Participants share priorities at engagement events in Johannesburg, South Africa (top) and Kigali, Rwanda (bottom)

Evidence from these consultations will be synthesised in each hub and presented in the TESF Country Papers (Batra et al., forthcoming; Elmi et al., forthcoming; Lotz-Sisitka & Kulundu-Bolus, forthcoming; Tusiime, forthcoming;), and will feed into discussions and decision-making for the TESF CfP at the network and country levels.

As described above, the approach to partnership within TESF reflects the desire to forge deep consensus from diverse perspectives and priorities through an intentional process of public expression, collective deliberation and decision-making. The same approach has underpinned various areas of activity within the network, such as developing our communications strategy and our copyright and authorship protocols, as well our MEL framework (see Section 6).

Reflexive questions for partnership working

Of course, the case above can be critiqued from various angles. Who participated in the agenda-setting exercise, and who did not? How do considerations of power and privilege affect who is invited into these participative spaces, and the rules of engagement within them? There is a need for ongoing reflexivity throughout our activities. The following questions are intended to stimulate thinking about our assumptions, thinking and practice (Malthouse et al. 2015). They can be used individually or in groups to facilitate thinking and decision-making in line with Type 2 institutional learning.

Do key documents and statements such as Calls for Proposals, evaluation frameworks, ethical guidelines and publishing protocols challenge or reproduce long-standing inequities along the lines of gender, wealth, and hierarchies of knowledge?

How inclusive is our language in internal and external communications? Are we challenging deficit discourses (Aikman et al 2016) in relation to gender, class, caste, livelihoods, rurality, and indigenous knowledge and perspectives? Are we contributing to the development of vocabularies to replace problematic terms such as 'Global South' and 'capacity building' which perpetuate inequalities?

Within the network, how can we ensure that the participation of different stakeholder groups is 'minimally distorted by power relations' (Wals 2019, p.62)? For instance, where research priorities diverge – e.g. along substantive, methodological, disciplinary or sectoral lines – are these addressed transparently and equitably? Where different stakeholder groups have different priorities and expectations for the project, are these reflected in what is monitored and evaluated, and how the evaluation findings are communicated?

Are we supporting the 'meaningful and equitable participation' of individuals and groups within the network (GCRF 2017)? How equitable is the division of labour and benefits within the network? Are we disrupting historical patterns which position Southern-based actors as data collectors for studies wholly theorised or designed in the North (Hountondji 1997)? Is intellectual leadership distributed across the network? Is our work grounded in perspectives, thinking and scholarship from the countries we're working with (Kaya & Seleti 2013)? Are we taking every opportunity to cite scholarship from these countries and culturally similar contexts?

Does the scheduling of meetings, events and other activities favour, or hinder, the participation of certain groups over others (e.g. in terms of time zones, workplace norms, religious or family commitments)? Can barriers be reduced by offering multiple opportunities for involvement (e.g. meetings at different on different dates/times, or supporting written, online or other forms of participation) and by covering travel, childcare or opportunity costs?

Are our quality assurance processes – for example, in relation to ethics, peer-review and finance management – dominated by European assumptions, norms and compliance agendas? Are we making space to think beyond these, for example, with reference to *ubuntu* philosophy (Takyi-Amoako & Assi-Lumumba 2018), or frameworks which problematise the universal principles, such as the Consequential, Ecological, Relational and Deontological (CERD) ethical appraisal framework (Stutchbury & Fox 2009)?

Does our approach to research, capacity mobilisation and project evaluation emphasise mutuality of learning within the network? How are we challenging global knowledge hierarchies which value the work of academics over practitioners and other stakeholder groups? How can we avoid what Appadurai (1999) refers to as 'weak internationalisation', whereby Southern actors are simply inducted into a Northern-dominated status quo?

Do our dissemination and publication strategies challenge these inequalities, for example in terms of (first) authorship (Asare et al. 2020) and the accessibility of outputs, including languages and platforms of publication?

Are invitations to participate in TESF activities being extended to historically marginalised groups? What steps are we taking to ensure that funding and other opportunities for career advancement are reaching disadvantaged and under-represented groups? For example, is this embedded in the monitoring and evaluation indicators?

What are we doing, individually and collectively, to monitor and reduce carbon emissions resulting from TESF activities, which disproportionately affect the lives of people already affected by these cross-cutting inequalities?

How can ICT-mediated learning support capacity mobilisation without amplifying inequalities and without creating an over-dependence on technology at expense of much needed face-to-face and place-based encounters?

5. Spaces for collaborative action and learning

This section maps the spaces for joint action and learning within the network and (without foreclosing on other options) provides an early indicative map of the kinds of learning which are being pursued.

What kinds of learning are necessary, and how will it occur?

Paavola and Hakkarainen (2005) distinguish between three different understandings of learning encapsulated in the metaphors of *learning as acquisition*, as *participation* and as *knowledge creation*. *Learning as acquisition* refers to the processes by which individuals come to possess specific pre-existing knowledge or skills. This metaphor is often used in the context of individuals' learning, but may equally apply to that of groups (Ellis and Goodyear 2016). *Learning as participation* refers to the processes by which – through engagement in shared activities – individuals are incorporated into larger collectives, or enculturated into the norms and values of a particular community of practice (e.g. the education research community or a particular disciplinary tradition). *Learning as knowledge creation* refers to intentional processes of collaborative knowledge development through innovation, discovery and experimentation.

Since each of these is relevant for our purposes, TESF is seeking to mobilise capacities within the network to support: the acquisition of relevant existing knowledge and skills; participation in relevant communities of practice; and the co-creation of new knowledge required for transforming the processes and outcomes of formal and informal education for sustainable futures.

But how can these forms of learning be supported? TESF seeks to foster **sustainability-oriented ecologies of learning** within the network:

> *a blended learning space where multiple actors [with] different backgrounds co-create sustainability organically using a variety of tools, relations, and forms of learning…[It is] a networked, facilitated, and mediated configuration of formal and informal forms of learning aiming for and embedded in a change challenge. (Wals 2019, p61-64)*

TESF supports a wide range of planned, and potential, modalities of learning. This includes, for example, collaborative papers such as this one, which are a means of sharing knowledge and skills between authors with variable academic experience and substantive concerns through the process of co-authorship. Other learning and capacity development opportunities of particular importance for our purposes are those presented by up to 80 funded projects which will be conducted through multi-stakeholder partnerships in the hub countries. The following section considers in greater detail the learning opportunities presented by these projects.

Case study: Learning in multi-stakeholder research projects

Figure 1 provides a visual representation of how these projects will support learning as acquisition, participation and knowledge creation through processes of experiential learning, collaborative inquiry, and bespoke research methods training.

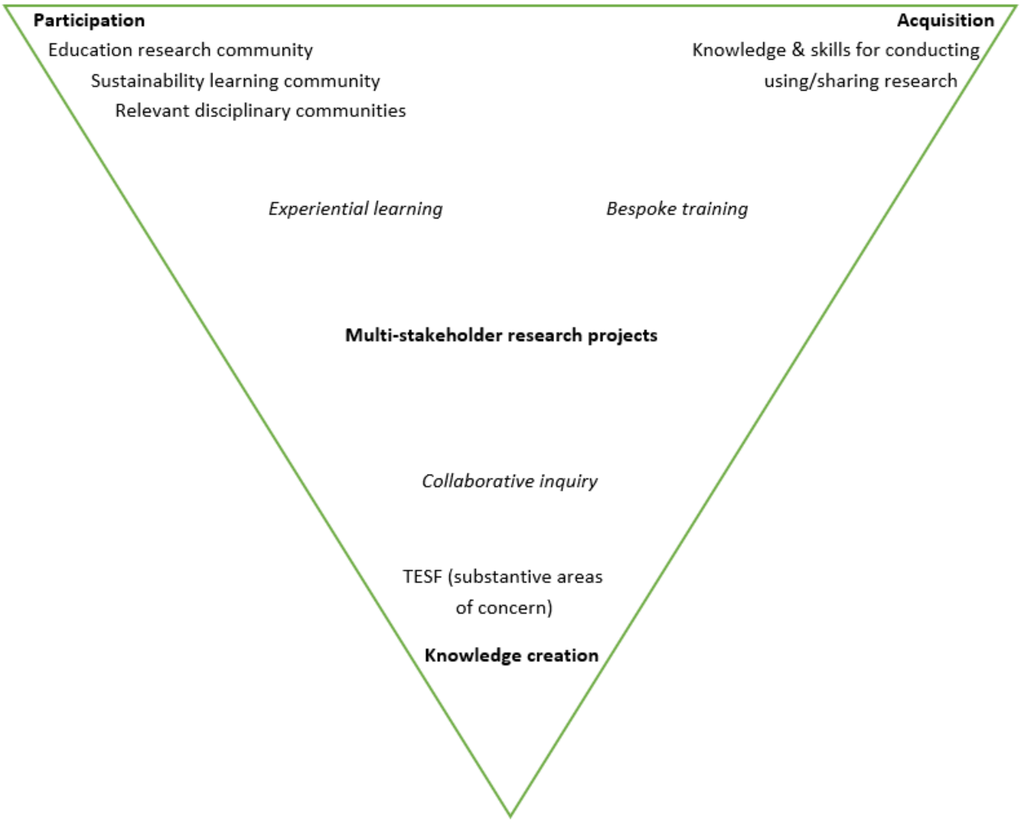


Figure 1 Modalities of learning within multi-stakeholder research projects

To elaborate on Figure 1, an important strand of learning and capacity development through multi-stakeholder research projects will occur experientially through participation in research practice. Through engaging in research practice (Wenger 1998), participants gain experience of the tacit and formalised expectations and rules of engagement within their field. Learning occurs through everyday interactions, such as meetings and other modes of communication, as well as through more formal aspects of research such as establishing a focus, designing instruments, analysing data, and communicating for different audiences, with the many opportunities for feedback, reflection and learning along the way (including the 'Reflexive Monitoring in Action' mechanisms described in Section 6 below). In addition to this experiential learning, formal training opportunities will be provided based on specific requests from grantees. Training will draw on existing expertise and relationships within the network. Although the nature of training requests is as-yet unknown, we anticipate it focusing on specific aspects of conducting, using or sharing research.

While we should always be cautious about the uncritical international transfer of educational resources, one potentially useful heuristic for mapping key knowledge and skills is the Researcher Development Framework (RDF) (Vitae 2010) which was developed in the UK context as a means of supporting university staff and students to audit and plan for their own professional learning. The RDF (Figure 2) indicates the values, knowledge and skills which are considered important for researchers in the UK context. As such, it is one entry point for thinking about the salient aspects of research capacity which may be a focus for different individuals and groups at different locations and levels of the network.

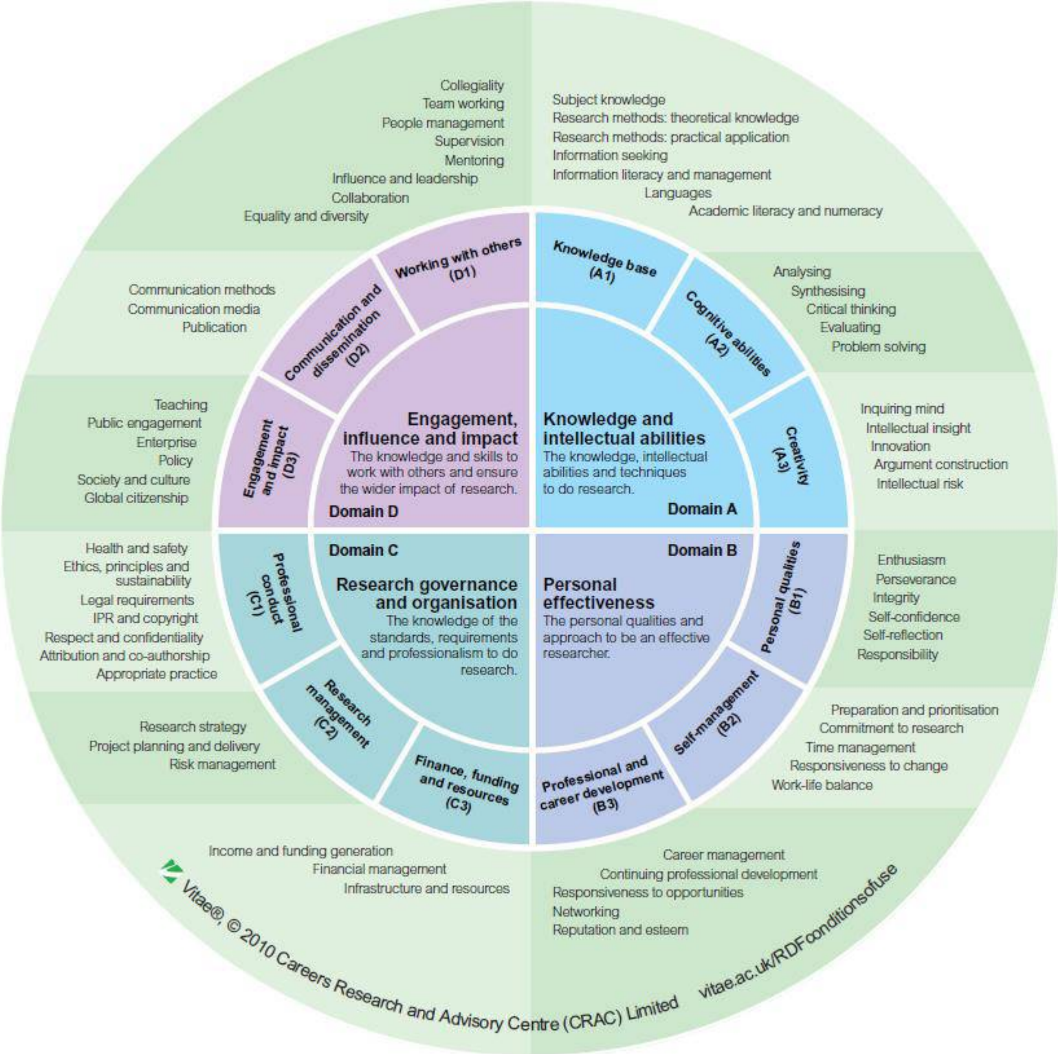


Figure 2 The Researcher Development Framework (Vitae 2010)

The third type of learning envisaged through multi-stakeholder research projects is that of knowledge creation through processes of collaborative inquiry and iterative cycles of observation, analysis, reflection and action (as outlined in Section 6, 'Reflexive Monitoring in Action').

Facilitating transformative learning

Whether or not transformative social learning is successful in creating the right conditions for healthy learning systems in which capacities can emerge and be strengthened, depends upon the quality of the process and, with that, the quality of the process facilitator. Perhaps it is impossible and even undesirable to find all these qualities in one person but often these qualities are all there in a distributed form amongst the participants in which case the challenge is to identify and connect them in a good way.

The process facilitator has a crucial role as someone who (Wals et al. 2009): keeps the process open (ensures access to the process, openness regarding the agenda, transparency of the process); guarantees security (protection against risks resulting from participation); knows how to deal with conflicts that arise; has no hidden interests with respect to the outcome; pays attention to the monitoring of progress; ensures there are always sufficient stimuli, challenges and a '*sense of urgency*' to maintain momentum; can articulate and show how progress has been made even when people might feel little has changed; can keep the focus on the choices that have been made and the path that has been chosen or flag when there are deviations and that it is good to reflect on those. But there is more still, the process facilitator must also make sure there are suitable work styles and forms (role-playing, excursions, citizen science, simulations, et cetera), materials (flipcharts, images material, ICT-based tools, etc.), feedback mechanisms (newsletters, websites, progress reports), and will also have to monitor the external relations (contacts with those granting subsidies, the environment of the process, interested outsiders). Lastly, a process facilitator is: a good listener, sensitive to signs (political, emotional), a good manager and organiser, breeds trust, a good navigator in areas of tension, a good discussion leader, an animator and has no hidden agenda.

Within the TESF context, process facilitation skills are important for individuals and groups who take on a central role in the formal Monitoring, Evaluation and Learning (MEL) process at different levels – especially the `hub-level monitors' who are tasked with collecting and analysing data within partner countries. In the next section, we outline the core elements of the MEL process and the practical strategies for its implementation in line with the principles of capacity mobilisation.

6. Monitoring, Evaluation and Learning

The approach to monitoring, evaluation and learning (MEL) for TESF is intended to support progress towards our objectives relating to network development and knowledge creation (see Box 4) and the concerns expressed above with respect to equitable partnerships, capacity mobilisation, and real-world impact. It is also designed to help us address network-level research questions:

i) how can collaborative action and learning for TESF be facilitated and sustained in ways that are equitable and mutually enriching? And
ii) how can new knowledge be co-produced and engaged to support socially and environmentally just change?

Box 4 TESF network objectives

Objective one: Develop a sustainable network of researchers based in universities, NGOs, government departments and CBOs with the capacity to undertake and use rigorous transdisciplinary, innovative, impactful research facilitated through the work of four national hubs in India, Rwanda, Somalia and South Africa.

Objective two: Synthesise and disseminate existing and emerging knowledge about the nature of SD and how it shapes the need for transformative education system change.

Objective three: Co-produce the evidence and arguments urgently needed to transform education and training systems so that they become drivers of socially and environmentally just development.

Source: Tikly et al. 2020

For these purposes, our approach to MEL can be characterised as:

> *an ongoing process of monitoring, reflection and action that focuses on (i) understanding what the TESF network aspires to achieve, and what it is achieving, at different levels and in diverse contexts; and (ii) creating mechanisms to identify and, wherever possible, address gaps between aspirations and realities.*

TESF takes advantage of two forms of monitoring and evaluation: multilevel values-centred evaluation (mVACE, see below; Brockwell 2018, Brockwell et al., forthcoming) and Reflexive Monitoring in Action (RMA; van Mierlo 2010). In line with the principles for partnership working and transformative research discussed above, these approaches emphasise active stakeholder involvement in joint agenda-setting, collaborative learning, and creating space for emergence in light of changing understanding, perspectives and contexts. They address different aspects of the MEL process which can be broadly defined as the 'what' and the 'how': mVACE provides a strategy for determining *what* is to be monitored and evaluated (i.e. co-creating indicator frameworks and data collection tools), while RMA is a means of *how* MEL can be integrated within project cycles at different levels. During the processes of data analysis and visualisation, and the generation of reports and recommendations, mVACE and RMA are effectively interwoven and the distinctions between them become less prominent.

Multilevel values-centred evaluation (mVACE)

In common with earlier values-based approaches to evaluation, such as `WeValue' and 'Starting from Values' (e.g. ESDinds 2011; Burford et al. 2013, 2015, 2016; Hoover & Harder 2015; Harder & Burford, 2019), mVACE involves the co-design of indicators through iterative dialogues about processes and outcomes that project participants (and, of course, funders) view as `meaningful, valuable and worthwhile'. This co-design strategy is both *inductive*, in the sense of 'drawing out' values and themes from participants in their own words rather than imposing a framework derived from academic theory, and *intersubjective*, in the sense of building mutual understanding within a context of shared practical experience (c.f. Brockwell, 2019).

Where mVACE differs from previous approaches, however, is in its explicit recognition of power differentials within the process of indicator development and its commitment to decolonising evaluation by surfacing and challenging structural inequalities. This reflects the wider partnership principles discussed above, and the desire for Types 2 and 3 institutional learning that constitute a golden thread running through the TESF programme. While it does not negate the importance of funders' standard reporting mechanisms, which are useful in that they allow analysis across multiple projects within a funding scheme, the mVACE approach seeks to challenge perceptions of monitoring and evaluation as being solely concerned with compliance. This is achieved by placing indicators created by network participants on an equal footing with those derived from funders' data collection instruments.

Within the TESF context, we anticipate that mVACE will contribute to 'meaningful and equitable' research partnerships by:

i. Deliberately opening and maintaining spaces for diverse values, perspectives and priorities within the indicator framework (including those of historically marginalised groups), without losing track of the priorities that have been agreed in advance with funders
ii. Supporting ongoing meaning-making in diverse languages, and through a variety of mechanisms, around core project objectives and terminologies
iii. Strengthening relationships of mutual trust and understanding between participants by highlighting consensus where it exists, but also creating safe spaces for diversity and dissensus.

These three expectations will be probed and challenged through the course of the programme at the level of 'meta-monitoring', i.e. collecting and analysing data on the effectiveness of the MEL process, by an external evaluator (Dr Ashley Brockwell) with expertise in mVACE and learning for sustainability.

The first stage of mVACE, collaborative indicator development, is already in progress and outlined below. The second stage will comprise the co-design of data collection tools at the levels of the network, the hubs, and the grantees or funded projects.

Collaborative indicator development

The process of collaborative indicator development began with a values elicitation phase at the project launch event in Bristol in January 2020. In this phase, workshop participants identified project outcomes that they regarded as valuable, meaningful or worthwhile, and envisioned best-case scenarios for TESF. This `values-centred' approach is underpinned by well-established concepts of participatory, collaborative and utilization-focused evaluation, and in particular, of process use in evaluation – the recognition that an evaluation process starts to bring tangible benefits well before the publication of the final report (Burford et al. 2013). Its key features include fluidity, responsiveness to change, and inclusion of diverse voices to generate a co-created indicator framework.

Early stages of collaborative indicator development in Bristol January 2020

Outputs from the Bristol workshop, in combination with outcome statements extracted from the original bid documents and captured from keynote presentations at the event, generated a diverse range of values-based 'proto-indicators' (statements to catalyse conversations about potential indicators). A series of online webinars in February and March 2020 gave network members opportunities to collaborate and co-design a draft indicator framework by selecting the most relevant proto-indicators, organising them into strands and sub-strands, optimising the wording, and adding new indicators as necessary.

Specifically, Strand A of the framework consists of collaboratively designed indicators relating to four sub-strands:

- A1: Network development
- A2: Capacity mobilisation (corresponding to the 'learning as acquisition' and 'learning as participation' aspects outlined in Figure 1 above)
- A3: Knowledge co-creation
- A4: Knowledge dissemination

This strand corresponds to what Hogard (2008) has termed 'confirmatory process evaluation', i.e. confirming the extent to which the project is unfolding as intended (or not) and proposing actions, where necessary, to bring it back on track. This resonates with the use of Reflexive Monitoring in Action (see below) to return, on a regular basis, to the question of whether the anticipated system transformation outcomes are being achieved.

Strand B of the framework has no predefined indicators and is dedicated to 'exploratory process evaluation', i.e. gaining a better understanding of how an innovative or novel project is actually operating (Hogard 2008) through a modified version of the 'Most Significant Change' technique (Serrat, 2009) to map emergent impacts in different arenas – local, national, international, etc. Participants at different levels (network, hubs and grantees) will be invited to collect stories of unexpected or surprising changes that have arisen as a result of the project, and then to choose the stories that they view as the most valuable, meaningful or worthwhile. This is another form of values-centred evaluation, which is retrospective rather than prospective.

	Monitoring processes	Evaluating outcomes
Strand A	• Is the project being delivered as stakeholders hoped it would? (*Confirmatory* process evaluation) • What changes are needed, if any, to get processes back on track?	• Is the project achieving stakeholders' priority outcomes? • What can be done differently to improve outcomes?
Strand B	• How is the project being delivered in new, innovative or surprising ways? (*Exploratory* process evaluation) • Could these processes be helpful for other hubs / grantees?	• Which, out of all the unexpected outcomes, do different stakeholders find most meaningful / valuable? • How can we communicate these outcomes to inspire others?

Table 1: A two-strand approach to monitoring, evaluation and learning

Mother-tongue values elicitation

The draft Strand A indicator framework for the network level is being continually refined through collaborative work on a shared document. This will be adapted to meet the differing needs and national priorities of the four hubs. One element of this is a mother-tongue values elicitation process, which seeks to understand the values and visions for TESF in hub countries using the native language of participants.

The importance of this approach can be exemplified by the term 'home-grown solutions', which represents a locally rich and meaningful category of practices in Rwanda that do not exist in a European context and have no direct translations in English.

These include *gacaca,* a community-based dispute resolution and reconciliation mechanism; *umuganda,* a specific practice of mutual cooperation in local neighbourhoods that also provides a platform for communication with the central government; and *umushyikirano,* an annual forum for participatory governance (Mayar 2019). The phrase 'home-grown solutions' thus carries layers of historical, cultural and political meaning that would be understood immediately by most Rwandan citizens, but could easily be misinterpreted by people outside Rwanda, e.g. as having something to do with subsistence agriculture.

To ensure that the most relevant meanings and nuances are captured in the English version of the framework, we intend to pilot a 'triple translation' approach inspired by Middle Eastern traditions of scriptural interpretation (Douglas-Klotz 2009, pp. 1-3) that encourages reflection not only on the 'face value' or literal meanings of a word or phrase (level 1), but also any metaphorical uses or culturally relevant associations (level 2), and experiential or mystical aspects (level 3), where applicable.

The process of collaborative indicator development outlined above reflects key principles of TESF, namely: to co-produce knowledge; attend to participatory inequalities; and draw on indigenous knowledge practices as a basis for decolonising research methods. We are exploring different ways of displaying the framework and managing the data, including mind-maps and spreadsheets.

Reflexive Monitoring in Action

While collaborative indicator development is primarily concerned with *what* is evaluated, Reflexive Monitoring in Action (RMA) focuses on *how* MEL is actioned within a project to facilitate system-level innovation. This approach is intended to support the transformation of systems which are highly resilient and resistant to change, in part because they are embedded in the power dynamics and assumptions of wider socio-economic and political systems. Progress towards this requires those involved to engage in learning and reflection frequently, if not continuously (see also Axelby et al. 2020). An RMA approach entails an ongoing, systematic and iterative process of reflection on the relationships between three key elements:

i. The ambitions of the project, as outlined in the indicator framework
ii. The current norms of practice and how they are embedded within the respective systems
iii. Developments that may present opportunities for, or barriers to, innovation

As envisaged for TESF, this will involve named individuals adopting the role of monitor, engaging in a sequence of observation, analysis and reflection activities, and then recommending adjustments to project activities to maximise the likelihood of system change.

Our approach to RMA focuses on actions that are expected and enacted in the four hubs, where the actors involved reflect on the ambitions of the innovation plans, the practices flowing from their implementation, the ways these are embedded in communities, schools and universities, and on developments in the wider system. These reflections are translated by the participants into re-affirming, fine-tuning or re-designing their plans and practices. This iterative, reflexive way of working can contribute 'to coherent, structural change without the route and destination necessarily being mapped out precisely beforehand' (van Mierlo et al. 2010, p. 12).

There are essential differences between this iterative and reflexive approach and more traditional and familiar MEL practices which may reflect neo-colonial narratives of quality assurance and accountability. As discussed previously, this is due to the complex nature of education for sustainable futures. Since the future may not develop as predicted, strategies have to be developed 'on the fly'; some results only become visible after a time, and a project's objectives are likely to shift during implementation. It is, therefore, not realistic to have an independent evaluator collect data for subsequent evaluation using only a pre-defined set of objectives – although it remains important, of course, to ensure that funders' reporting requirements are met at the whole-network level.

Participatory types of monitoring and evaluation in which the actors have an equal say can help ensure that participants learn together and adapt together. Learning from monitoring and evaluation is not the end in itself, but a means of developing solutions to challenges encountered in system innovation projects. This will allow projects to contribute to the structural changes that are needed for sustainability, and help participants 'go a step further than making plans with no obligations, and genuinely get involved with an initiative' (van Mierlo et al. 2010, p.12).

Multilevel design

The multilevel MEL process design mirrors the structure of the project as a whole, distinguishing three levels: the whole-network level, the hub level (referring to the four country hubs), and the grantee level (referring to the small and medium-sized projects that will receive grant funding through the hubs). The multilevel design reflects an understanding that different stakeholders and contexts are likely to have different priorities for evaluation (Brockwell 2018). By embedding procedures for monitoring the participation of different groups at the hub level, TESF is supporting the development of institutional MEL capacity beyond the lifetime of the programme. Hub-level monitors will support grantees with their self-evaluations – facilitating reflection on what to evaluate, providing a template for grantees to complete at the mid-term review and final evaluation stages, and drawing out learning between and across projects. In light of the diverse professional and educational contexts represented by the four hubs, this will inevitably play out differently from one hub to another. Some, for example, may be used to working in a more structured or 'top-down' way, while others are more comfortable with fluidity, ambiguity and transgressive learning.

At the network level, the external evaluator (Dr Ash Brockwell) will serve as a `meta-monitor', highlighting synergies, divergence and key case studies between and across hubs, and identifying specific opportunities for sharing and deepening mutual learning. This will contribute to enhancing the relational aspect of capacity as well as challenging participants to listen, learn and think in new ways.

7. Conclusion

This paper has presented our understandings and plans for collaboration, learning and action in the context of Transforming Education for Sustainable Futures. In doing so, we have emphasised the importance of *mobilising capacities* for progress towards TESF's aims with respect to knowledge co-production, supporting sustainability-oriented innovation, and network capacity development. As a key feature of research and practice in TESF, we will return to this topic in subsequent publications.

Despite TESF's substantive concerns with education and sustainability, certain aspects of our work have far wider relevance to other GCRF and similarly-configured projects which are charged with the dual purposes of facilitating international interdisciplinary research while strengthening research capacity in equitable ways.

First, as we argue above, mutual capacity development is not something that will *necessarily* result from engagement in such partnerships and requires anticipation, planning and ongoing reflexivity. We identify strong internationalisation (Appadurai 1999) which draws on Southern knowledge, perspectives and practices as a promising basis for developing capacities in ways which transcend rather than reproducing the status quo of academic knowledge systems governed by Eurocentric norms.

Second, and relatedly, is the issue of the equitable participation in processes of evaluation, decision-making and agenda-setting. As illustrated in this paper with reference to the participative development of the Call for Proposals and the MEL indicator framework, TESF has sought to elicit and incorporate the perspectives and priorities of different groups throughout activities.

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The TESF Background Paper Series sets out some of our foundational concepts for the work of the Network Plus and informs our forthcoming call for proposals. In many cases, these Background Papers have grown out of our shorter Briefing Note series. This work collectively informs future outputs to help us trace learning throughout the TESF lifecycle. You can follow this trajectory by visiting our Resources page for additional Background Papers and other writing from Network Plus.

Acknowledgements The support of the Economic and Social Research Council (UK) is gratefully acknowledged by TESF (award title 'UKRI GCRF Transforming Education Systems for Sustainable Development (TES4SD) Network Plus').

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Suggested Citation Mitchell, R., Wals, A., Brockwell, A. J. 2020. *Mobilising capacities for Transforming Education for Sustainable Futures: Opening spaces for collaborative action and learning*. TESF Background Paper Series. Bristol, TESF. DOI https://doi.org/10.5281/zenodo.4134931

Version 1.0 November 2020

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TE|SF

TESF is a GCRF funded Network Plus, co-ordinated out of the University of Bristol, working with partners in India, Rwanda, Somalia/Somaliland, South Africa the United Kingdom and the Netherlands.
We undertake collaborative research to Transform Education for Sustainable Futures.

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