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From rhetoric to reality: Examining the policy vision and the professional process of enacting Learning for Sustainability in Scottish schools.

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ABSTRACT

Learning for Sustainability (LfS), as conceived by Education Scotland and the General Teaching Council for Scotland (GTCS), spans all curricular areas and it is positioned as the responsibility of all - teachers, learners and educational leaders (Scottish Government 2016). Yet, such comprehensiveness has the potential to render the term and its purpose equivocal and perfunctory. Our experience working with teachers in this area suggests that the concept and term 'Learning for Sustainability' are not widely understood, leading teachers to raise questions about the relevance of LfS policy in relation to their everyday professional practice. Beginning from this position our paper explores the tension between the policy vision and the professional reality. We follow three lines of enquiry: first, we outline the existing policy architecture in Scotland; second, we examine the basic understanding of the terminology and conceptual understanding of LfS across Scotland through a recent study conducted by Kirk (2017); third, we review a professional learning programme we have developed and deployed across Scotland. We suggest four key areas for change that would support the enactment of LfS within Scottish schools and so realise some of the potential the LfS agenda affords - namely, high quality professional learning, motivated staff working with others, interdisciplinary learning tailored to the needs of the students, and leadership within a clear strategic framework. We conclude with a note of caution, that although there is evidence that LfS can have a positive impact on attainment, helping learners to strive towards 'sustainable futures' is too important to be reduced to the current narrow national focus on attainment outcomes.

Keywords: *learning for sustainability; sustainability education; policy enactment; professional development*

SITUATING THE STUDY: THE JOURNEY OF SCOTTISH EDUCATION FROM DEVELOPMENT TO SUSTAINABILITY.

The focus of the paper is the development and enactment of the Scottish policy approach to sustainability education - Learning for Sustainability. To understand the term, we must briefly consider its origins and influences both nationally and internationally. The role of education in addressing the most serious problems of our time is not new, the most commonly used and universal term to refer to this is 'education for sustainable development' (ESD). This is, in turn, dependent on an understanding of sustainable development – which brings two key areas together; development (a need for growth to ensure development for all humans globally), and sustainability (from an ecological perspective that recognises the needs for limits to growth). This combination does not exist without tension. Even though this is recognised and accepted in terms of the Brundtland Report's definition "the ability to make development sustainable to ensure that it meets the needs of the of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development 1987:16), the term remains contentious as it privileges the human. More recently Martin *et al*.'s (2013) description of Education for Sustainable Development (ESD) de-centres the human by emphasising the significance of the socio-ecological dynamic by describing "a process of learning how to make decisions

that consider the long-term future of the economy, ecology and equity of all communities" (p. 1523), whereby 'all communities' points to our interdependence and the inclusion of all planetary communities. This broadened conceptualisation and ethical maturation during the late 1990s and early 2000s positioned ESD as bringing together societal, economic and ecological considerations. Sterling (2001) was key here in making a distinction between 'Sustainable Education' (SE) and ESD, by suggesting that SE required a shift in how we conceive education in terms of policies, paradigms, practice at an epistemic level so as to embed sustainability in our culture and approach. This urged a shift in education from a transmissive process of learning how to learn, towards a more transformative process of learning rooted in a way of thinking, being and doing. The work of Lavery and Smyth (2003), McNaughton (2007), Sterling (2001, 2012), and others, were key to developing the philosophical and foundational basis of LfS as it came to be conceived within Scottish education. A full introduction to LfS will follow within this paper.

INTERNATIONAL APPROACHES: SIMILARITY OR DIFFERENCE?

Other countries such as Sweden (Swedish National Agency for Education 2006, 2010), New Zealand (Ministry of Education 2007), Australia (Australian Government 2010) and Iceland (Ministry of Education 2012) have adopted sustainability into their own educational curriculums in some form or another. For example, the current Icelandic curriculum has six key pillars, which include literacy, democracy and human rights, equality, health and welfare, creativity and sustainability. Their curriculum documents describe education towards sustainability as '… making people able to deal with problems that concern the interaction of the environment, social factors and the economy in the development of society' (Ministry of Education 2012:18). Paralleling these Icelandic developments, the Australian primary and secondary education sectors have a history of engagement with education for sustainable development. Dyment *et al.* (2015: 1107) describe the educational focus 'on a broader understanding of sustainability acknowledging principles such as systems thinking, integration of economic, social, cultural and environmental dimensions and notions of intra- and intergenerational justice, and this has translated into policy guidance and guidance emerging since 2006 onwards. Substantially, the New Australian Curriculum Australian (ACARA 2010) includes sustainability as one of three cross-curricular priorities, the other two are 'Aboriginal and Torres Strait Islander histories and cultures' and 'Asia and Australia's engagement with Asia' (Green and Sommerville 2014; Dyment *et al.* 2015).

When these international approaches are examined there are universal similarities in terms of embedding and enacting curricular developments. For example, Palsdottir (2014) following a four-year mixed method study of teachers and sustainability education in Iceland revealed tensions with sustainability education enactment whereby teachers reported experiencing difficulty 'in understanding the concept of sustainability', feeling 'a lack of knowledge about sustainability issues', acknowledging 'the problem of teacher's working in isolation' and highlighting 'a poor infrastructure of CPD [continuing professional development]' amongst other issues. This resonates with the findings of a study conducted in Victoria, Australia by Green and Somerville (2014) who after studying primary school sustainability education revealed that 'pre- and in-service teachers' lack of confidence and preparedness to conceptualise and practice sustainability' were key barriers to its implementation, (p. 833). Similarly, Dyment and Hill (2015) and Dyment *et al* (2014) reveal a clear tension stating that whilst on 'one hand, they [the cross-curricular priorities, of which Sustainability is one strand] seem to be sophisticated, complex, highly involved and ambitious; on the other hand, they could be seen to be complicated, overwhelming and confusing'. Such international research reveals a consistency in terms of the issues faced by teachers, regardless of geographical location, in relation to sustainability education (see Eames *et al.* 2010; Borg *et al.* 2012; Olsson *et al.* 2016 for further international perspectives). In Scotland, however, given the relatively recent emergence and implementation of LfS such research findings do not exist.

Responding to the lack of Scottish focused research we have examined and critiqued the policy-practice tension and interrogated the opportunities and challenges that exist within our national context. We did so by focusing on the rhetoric and reality of LfS to reveal the issues facing Scottish teachers; as such our work aims to offer a unique and original contribution to the current literature and develop the ongoing international conversation. We acknowledge that LfS can be conceived as an example of policy reform, and so the barriers and tensions often relate to cross-cutting issues such as curricular development and the role and identity of teachers as agents of change more generally. Therefore, to fully understand the

implications of LfS we need to consider the broader educational context in which it is situated, for example the processes of curricular development, professional learning and teacher agency. These aspects are not individually discussed within this opening section rather they are woven throughout the paper as key themes.

RESEARCH APPROACH

Our paper follows three lines of enquiry. First, we outline the policy development story and highlight the origins of LfS within Scottish education. Second, we explore aspects of the degree to which teachers understand LfS, which we do by problematising the notion that the pursuit of a whole school approach to LfS is tricky, if a basic understanding of the terminology and practice does not exist within schools. Third, drawing on our time spent with teachers through a career-long-professional-learning programme, Connecting Classrooms (discussed in more detail later), we examine the tensions between policy vision and professional practice more explicitly. This process distilled some key reflections gained by reviewing the teachers' practitioner enquiry style course assignments. We used these insights to illuminate ways in which LfS has been understood and embedded within professional practice in the classroom and whole-school practice. We conclude the paper by offering practical steps to further support the embedding of LfS across schools in Scotland.

We must acknowledge the influence of two factors driving this research. First, in our experience LfS is well understood by a few, but misunderstood by many. There are a number of reasons for this, but one major issue is the lack of prescription within the policy guidance, which makes it difficult for school leaders, and for teachers to see their subject disciplines represented in the process. This issue of uncertainty when introducing new sustainability policies has been raised by others. For example, Sterling (2001) discussed the relationship between policy prescription and professional interpretation within the UK, and others such as Green and Somerville (2014), Borg *et al.* (2012) have looked at this within their own international contexts (Australia and Sweden respectively). Sterling (2001) argued that clarity about policy vision is needed alongside a 'strategic sense of how progress towards such a vision could be made' (p. 36). The implication being that policy can feel irrelevant if those enacting the strategy don't see themselves within it, if they do not see the direct implication or feel a professional responsibility towards the vision. He argues that the 'conjunction and mutual informing of the visionary and the practicable is essential in successful change, at any level' (p. 36). The forming of this delicate synergy between vision and practice is vital if the LfS agenda is to become embedded in all schools at all levels. Our professional knowledge and experience tells us that this mutual informing has not happened for all teachers, nor has it happened at all levels of leadership.

Second, we write from the pedagogical position that values LfS, its philosophical and moral endeavor, and the scope of the underpinning themes of environmental stewardship, social justice, economic security and civic democracy as a holistic and sincere attempt to 'live well' in this world (Griffiths & Murray 2017). As such we believe that LfS offers much needed learning opportunities for us all (teachers and learners) to engage in the process of becoming global 'citizens', and for each of us to consider, re-consider and develop the judgement, care, wisdom and personal action-orientation needed to deal with urgent personal, social and political aspects of 'living sustainably'. We acknowledge our investment in the development of the policy and the research that informed such policy, however we have taken a critical and impartial approach to this study as we recognise the need to fully understand the opportunities that exist alongside the real and felt barriers, and challenges within Scottish schools.

FIRST LINE OF ENQUIRY: THE SCOTTISH POLICY RHETORIC

Curriculum for Excellence and Learning for Sustainability

Over the past five years Learning for Sustainability (LfS) has emerged as a central concept within Scottish Education. Stemming from the work in 2011-12 of the One Planet Schools Ministerial Advisory Group (Scottish Government 2012), it has developed to underpin much of the formal curriculum structure and is a key part of the school inspection process, as evidenced in the self-evaluation and self-improvement guidance How Good is Our School 4 (Education Scotland 2015a). It is also a feature of the General Teaching Council for Scotland's (GTCS - the professional body that promotes, supports and develops the professional learning of teachers) requirements of teachers and education professionals; first through the

set of Professional Standards[1] that all teachers registered to teach in Scotland must meet, and second through the Continuing Professional Update process which in-service teachers must engage with. It is also embedded across much school-based and national professional development and GTCS Professional Recognition processes, and it is evolving within Initial Teacher Education Institutions (see Nicol *et al.* this issue).

As the One Planet Schools Advisory Group (Scottish Government 2012) and the GTCS Professional Standards provide largely complementary definitions of LfS, we have previously brought these together to form a working definition relevant to schools:

> 'Learning for Sustainability offers a holistic pedagogical approach that seeks to build the values, skills, and knowledge necessary to develop practices within schools, communities, and at governance levels within teacher education, that accord with the collective aim of taking action for a sustainable future' (Higgins and Christie 2018: 554)

As a pedagogical concept, it owes much to the longstanding independent development of its three key interrelated themes – 'education for sustainable development' (ESD), 'global learning' (GL) and 'outdoor learning' (OL). These terms are used here and throughout due to their use internationally, though it is important to note that synonyms are widespread, and in Scotland the terms 'sustainable development education', 'global citizenship' and 'outdoor education' have a long historical provenance (see Lavery & Smyth 2003; Higgins & Christie 2018; Higgins & Nicol 2018). The integration of key features of ESD, GL and OL in the conceptual development of LfS came about as the result of an extensive literature review for the One Planet Schools Ministerial Advisory Group (Scottish Government 2012), which made 31 recommendations, with five, key 'headline commitments':

- all learners should have an entitlement to Learning for Sustainability;
- every practitioner, school and education leader should demonstrate Learning for Sustainability in their practice;
- every school should have a whole school approach to Learning for Sustainability that is robust, demonstrable, evaluated and supported by leadership at all levels;
- school buildings, grounds and policies should support Learning for Sustainability;
- there should be a strategic national approach to supporting Learning for Sustainability.

These were accepted by Scottish Ministers in March 2013 (Scottish Government 2013); the same year that the GTCS included in the review of the Professional Standards the internationally unique commitment to require all teachers and education professionals to address LfS in their practice at all stages of their careers (GTCS 2018). The inclusion of LfS as one of three underpinning themes (values and leadership being the other two) within the suite of professional standards supports 'teachers in actively embracing and promoting principles and practices of sustainability in all aspects of their work' (GTCS 2018). Further, the notion of a whole school approach is demonstrably supported by the five 'headline' commitments above. As is obvious, this is very ambitious and wide-ranging, establishing duties for most, if not all, Scottish education professionals.

In 2015 a Learning for Sustainability National Implementation Group was formed to support the application and development of the 31 accepted recommendations. In 2016 their concluding report, Vision 2030+ (Scottish Government 2016) highlighted four key challenges facing the implementation of LfS:

- Promoting awareness of LfS as a concept and process so it is universally understood
- Taking LfS forward at a time of financial constraint with growing pressures on staff at school level and system leaders at local and national level

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[1] The GTCS (2018) Professional Standards exist to ensure teaching practices are 'underpinned by the themes of values, sustainability and leadership' and are 'integral to, and demonstrated through, all … professional relationships and practices'.

- Embedding LfS in professional review and development (PRD) processes at school level or through self-evaluation, to ensure it is not treated superficially but rather that it brings about more profound and deeper change

- Ensuring that LfS is not crowded out of school, local and national improvement plans due to other priorities and initiatives.   (Scottish Government 2016: 5)

These are significant challenges and their resolution requires long-term, sustained national commitment, but also at an international level too as the Vision 2030+ report clearly positions the LfS agenda as a platform for further action aligned Scotland's commitment to the to the Sustainable Development goals (SDGs) framework. In particular SDG Goal 4.7 offers increased momentum to the international significance of the development of LfS in Scotland, as does the 2016 Global Education Monitoring Report (UNESCO 2016) with its focus on 'Education for people and planet: creating sustainable futures for all'. Further, the SDGS are now at the heart of Scotland's National Performance Framework[2] so there are clear links across many policy agendas in Scotland, all of which positions LfS as a key national educational priority.

This national and international policy context highlights the origins, direction and potential of LfS, and in doing so, adds to the increasing tension that exists between the policy rhetoric and professional understanding of the policy intention, purpose and direction, and indeed between these and the international expectation of urgent action. It is essential to have a professional body that fully understands and supports the policy directive – the question is: do we have that universal collegiate understanding and support in Scotland; has the rhetoric become a reality for all?

SECOND LINE OF ENQUIRY: THE REALITY - TEACHER UNDERSTANDINGS AND MOTIVATIONS

Here we examine how practitioner understandings of LfS. We draw on contemporary research conducted by one of the authors of this paper (Kirk 2017) who is herself a full-time Religious Moral and Philosophical Studies teacher in a Scottish secondary school. This study was chosen as it is one of the first Master's level studies conducted by a practicing teacher on the topic of LfS practice and LfS policy within and about Scotland. As a teacher embedded within professional practice, Kirk (2017) feels the competing pressures and demands of her workload. For example, she notes that LfS came at a time 'of unprecedented change in Scottish education, particularly in secondary schools where SQA National Qualifications (were) being reviewed and revised', causing her to question where LfS sat within 'an already full curriculum' (p. 8). Her thesis critiques the obvious danger within LfS policy, whereby when LfS is positioned as the 'responsibility of all' it can quickly become the responsibility of no-one. Her work poses the question: will LfS simply become the responsibility of the subjects that 'are more naturally disposed to critical thinking environmental issues and social equity, such as Religious and Moral Education, Modern Studies and Geography?' (p. 10). This is an interesting question given the historical curricular links between sustainability and the sciences (for example in terms of ecosystems, biodiversity and energy production), Kirk reveals that different subjects may understand and so frame LfS very differently, which reminds us that there may be issues with interpretation within and between subjects.

With these issues in mind Kirk (2017) explored her colleagues' understandings of LfS especially in terms of the barriers faced when embedding LfS within their practice. The research was conducted in an inner-city secondary school on the East Coast of Scotland and involved a two-phase approach, first, using convenience sampling to conduct questionnaires (n=30) with teachers responsible for delivering the curriculum and second, individual interviews (n=8) with teachers from each of the eight curricular areas (Social Studies; Mathematics; Technologies; Health and Wellbeing; Sciences; Languages; Expressive Arts; Religious and Moral Education) in BGE[3].   The questionnaires were designed by Kirk and comprised five questions with the aim of identifying trends in terms of knowledge and practice of LfS across the teaching staff in her school. The individual interviews, built on the empirical data gathered through the questionnaires, were contextualised by having an interview with a teacher working within each of the eight curricular areas to consider subject responses to LfS. Her study revealed three key findings.

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[2] Scotland's National Performance framework: https://nationalperformance.gov.scot/
[3] For further details: https://education.gov.scot/scottish-education-system/policy-for-scottish-education/policy-drivers/cfe-(building-from-the-statement-appendix-incl-btc1-5)/What%20is%20Curriculum%20for%20Excellence?

First, Kirk's (2017) research provides evidence of confusion over the terminology, with many teachers identifying LfS as education related purely to the environment, with few teachers realising that global citizenship and outdoor learning are core elements and the importance of social justice, rights and other citizenship-related issues are key aspects of the policy. Her study revealed that subjects which have 'commonly approached themes of citizenship and the environment within their core curriculums, such as social subjects and religious and moral education were more confident in the delivery of LfS than those which historically have not, such as Maths and Home Economics' (p. 50). Kirk believes that this uptake in certain subject areas may relate directly to teacher confidence and she draws on Morris and Martin (2009) here, as they state that 'dealing with sustainability means dealing with a mess and most people avoid messes because they feel ill-equipped to cope' (p.156). Certain subject areas such as geography may offer more obvious connections to challenging discussion related to or involving outdoor learning, global citizenship and sustainable development education, therefore there is a more alignment and readiness to embrace LfS in some disciplines than others. These findings reflect the anecdotal evidence we've gathered through conversations whilst working with teachers since the emergence of LfS; how teachers have been confused by and avoided working with LfS as they did not understand what it meant or how it related to their subject area. The findings also align with international perspectives, for example Borg *et al.* (2012) found a similar situation in Swedish schools, highlighting the importance of 'subject adjusted' and nuanced professional development to support teachers to embed ESD within their professional practice (p.185).

Second, Kirk revealed a degree of trepidation amongst the teachers about the scope and remit of LfS; in other words, once the term LfS was understood there was a fear over the magnitude of the task that lay ahead. She poses a question: Given the current educational changes happening within schools and the scale of the global challenges we face, it is of course unsurprising that teachers feel daunted at the prospect of drawing LfS into their teaching. Consequently, she believed that support was needed to reassure teachers that whilst LfS requires no specialist input *per se*, it does require a willingness to engage with it, to understand how a teacher as an individual makes sense of it, and how they then bring that understanding into and through their teaching.

This form of engagement, attention and then intentional framing within everyday professional practice, is something that takes time to develop, and requires space in which to do so. It is not exclusive to Scotland either: Green and Sommerville (2014) reveal similar issues with the development of sustainability education in Australia whereby teachers are keen yet find the process difficult to engage with as they do not have the time, space or support to do so, Dyment and Hill (2015) report similar findings from New Zealand. However, moving towards a solution, this personal process of understanding and action taking could be brought into the classroom as it is the very essence of the process that we are requiring our learners to go through. LfS is not about telling people (young and old, teachers and learners) what to do and think, rather it is about giving space to critically consider current world issues to be able to form opinions, consider the world in which they want to live in and take appropriate action. Therefore, there is an opportunity here for exploration, consideration and co-construction of knowledge between teacher and learner and with one another collectively. As Griffiths and Murray (2017) suggest, 'if students are to learn to engage enough with the world to develop informed, critical, heartfelt judgements, a pedagogy is required that inspires, persuades and encourages them to pay attention and to re-think their outlook on the world' (p. 45). The practice of 're-thinking' our outlook on the world is not exclusive to students; we are all learners and we would all do well to engage in this process. This point emerges within the international literature too, for example Law (2005) in reference to ESD development in New Zealand states 'that teachers and learner should operate as a critical community of reflective thinkers' (p. 280).

This process of 're-thinking' is challenging. Earlier work by Griffiths *et al.* (2014) recognises this and their discussions echo much of what we (the authors of the present paper) have experienced through our time spent with teachers, where it was clear that open-ended pedagogies were demanding. Yet the reward can be found within the pedagogical relationships where 'teachers enable students to become who they are not yet, as they develop relationships not only with each other, but with school subjects and with what matters in the world' (Griffiths & Murray 2017: 47). Again this is clear within the international research: e.g. Law (2005) in reference to New Zealand's approaches urges a 'deeper critique and a broader vison' for education, calling for a 'whole system redesign to challenge existing frameworks' and to 'shift our thinking beyond current practice and towards a sustainable future'(p. 280). See Griffiths and Murray (2017) for a

deeper discussion on the role of education in 'learning to live well' in this world and the opportunities and challenges bound within that pursuit.

Returning to Kirk (2017: 20) and her case study research, she likens this process of engaging in an open-ended pedagogy to philosophy which requires thinkers to think for themselves. She quotes Kant who asserted that it is not possible to learn philosophy; it is only possible to learn how to philosophise (Bailey 2010). This is closely linked with the confusion issue surfaced earlier, and demonstrates that there is work to do in terms of supporting teachers to find time and space to consider how LfS can enrich and underpin rather than complicate or obfuscate their teaching. Indeed, the philosophical intention of LfS was to deepen and cohere curricula; underpinning rather than expanding workloads (Education Scotland Scottish Government 2016).

Third, even if teachers understand the term, and accept the challenge of drawing LfS into their teaching, there are still a number of practical and logistical barriers hampering full enactment, such as limited professional development, and lack of protected time and space to cultivate meaningful interdisciplinary learning (Kirk, 2017). One of Kirk's (2017) interviewees stated that 'we [teachers] are all really busy right now' and another from technologies stated that they had a 'lesson involving outdoor learning where pupils designed an outdoor classroom but it was dropped to make room for other projects when the benchmarks[4] were introduced' (p. 420). The policy architecture and headlines position LfS as a national priority, however it appears it has not been positioned within schools as a classroom priority. This is not a comment on teachers' capability and their lack of capacity to respond to policy requirements, but the lack of demonstrable priority and support at local authority and school level, and the lack of time given to truly understand the full extent of these policy agendas beyond a simple, tokenistic, tick-box approach.

However, Kirk's (2017) study also reveals that despite a lack of confidence in LfS and the presence of barriers identified, teachers of all subjects were able to highlight some links between their subject and LfS; therefore through discussion and creative space there is 'scope for LfS to permeate the whole school curriculum in a meaningful, non-tokenistic way' (p. 50). Interviewees talked about the need to 'put LfS on pupils' radars' to give it 'more exposure and to make learning more relevant for the next generation' (p. 43). There were also some interviewee suggestions emerging about 'LfS not being confined to the formal learning and teaching aspect of the school, in the classroom, but rather it should permeate everything we do in the school' (p.45). Such statements reflect the intention that LfS should span all levels of the school and community including policies, buildings and practices (this is in line with the original LfS report for the Scottish Government 2012).

Crucially, Kirk's main conclusion reinforced the need for LfS to be developed in a connected and cohesive way, and she suggests that the first step towards achieving such association is to provide all teachers with a clear and in-depth understanding of LfS: what it means, who it relates to and why it is fundamental to education. This includes challenging the tendency to equate sustainability with environmental issues only. Whilst there are no surprises in Kirk's conclusions, there is a clear urgency: she recommends that a clear understanding of LfS needs to be established between all practitioners, pupils, parents and external agencies in order that the importance of LfS is shared and it is positioned as an explicit part of the whole school curriculum. This builds on previous international research, for example Borg *et al.* (2012) concluded their study of ESD enactment in Swedish schools by stating that until ESD becomes 'a normal part of every school's culture it will be difficult to implement' (p. 204).

Given the evident urgent need to respond to an increasing array of interconnected global and local environmental, societal and economic challenges of a scale and complexity and consequences hitherto unknown (e.g. see Ripple *et al.* 2017; Intergovernmental Panel on Climate Change 2018 etc.) there is a clear moral imperative for formal education to inform and support pupils to face and address these: LfS is clearly not a policy that can wait. So, what can be done to support the move from LfS rhetoric to LfS reality? How would we embed LfS through a whole school approach and what would that look like?

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[4] Benchmarks support teachers to plan learning teaching and assessments, the benchmarks provide clarity on the national standards expected within each curriculum area at each level – see here for further information:

https://education.gov.scot/improvement/learning-resources/curriculumforexcellencebenchmarks

THIRD LINE OF ENQUIRY: SUPPORTING ENACTMENT

A number of professional development programmes have emerged to support practitioners to navigate the policy landscape, understand the philosophical rationale, reflect upon their discipline and imagine new possibilities for re-orienting their professional practice. In terms of scale, reach, funding and support 'Connecting Classrooms: Learning for Sustainability' (CCLfS) is by far the most significant. Between 2015-18 it reached about 500 primary, secondary and additional support needs (ASN) teachers. We (members of the authors team and colleagues) developed and taught the programme, and in doing so we have been able to work closely with a number of teachers, enabling us to gather some understanding of the reception and implementation of LfS in Scotland.

The CCLfS programme was developed by University of Edinburgh (UofE) and Learning for Sustainability Scotland (LfSS)[5] staff in collaboration with, and funded by the British Council as part of their UK-wide Connecting Classrooms programme[6] which provides local 'career-long professional learning' (CLPL) and support for teachers to visit partner schools overseas. The national programme arose due to British Council (2017) awareness of a growing consensus that school systems across the world need to be clear about the purposes of education and develop young people with the skills and competencies that relate to the world in which they are living and will live. They also recognised the alignment with, and were sympathetic to, the national need for professional development in LfS both as a concept and pedagogical practice.

Through the three years it ran, the CLPL programme was delivered over ten-week blocks using a blended learning strategy. It included two face-to-face (all day) sessions, one at the start and another at the end of the course, and online delivery between those sessions. The programme aimed to introduce the philosophical origins of LfS, explore the underpinning concepts and policy story and it offered a space for discussion and reflection on what LfS meant to them personally and professionally[7]. The online delivery involved collaborative sessions, including individual tasks, readings, group discussions and personal reflection including practical advice and support for activities with learners. Whilst the course formally concluded with an assignment (see below) and opportunities to apply for funding to visit partner schools overseas, continuing online collaboration was encouraged for ten months beyond the ten-week period of the course. This extension allowed the group and tutors to support teachers beyond the 'taught' sessions as they worked to embed LfS within their professional contexts. Throughout the course the teacher participants were encouraged to contextualise their knowledge and understanding by grounding their thinking and reflection within their own educational context. to develop their practical assignment using their school or local authority context and, in so doing, build upon existing, or develop new, partnerships. The assignment for this course centred on an LfS Case Study, which the participants designed, developed and self-evaluated, to demonstrate and reinforce their ability to contextualise the course content within their own professional education setting.

The programme gained accreditation by the GTCS to allow participants to submit evidence for Professional Recognition in LfS[8]. This is a voluntary scheme which allows teachers and education professionals to demonstrate that 'their practice is underpinned by on-going reflective enquiry', and recognised for their commitment to a particular area, often related to responsibilities in their school. Their assignment and their enacted ten-month plan could be submitted as part of this professional recognition process. By January 2019, 50 teachers had achieved professional recognition, with many still working through the process.

The GTCS requires all registered teachers to undergo a regular substantial reflexive 'Professional Update' (GTCS 2018) process. During the extended CCLfS course, teachers were encouraged to reflect upon their teaching context using their reflective journals, through discussion with other learners, the

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[5] Learning for Sustainability Scotland is Scotland's United Nations University Recognised Regional Centre of Expertise on Education for Sustainable Development. http://learningforsustainabilityscotland.org

[6] Full details of the CClfS programme can be found here alongside a review of the full UK wide British Council Connecting Classrooms programme: https://www.britishcouncil.org/sites/default/files/connecting_classrooms_concise_report.pdf

[7] Teacher reflection videos can be viewed here: https://www.ed.ac.uk/education/professional-learning/connecting-classrooms-learning-and-sustainability/connecting-classrooms-videos

[8] http://www.gtcs.org.uk/professional-development/professional-recognition.aspx

course tutors and their line-manager as an integral part of their professional review and development discussions. In our reading of these journals it was evident that this approach helped to stimulate discussions around LfS within their classrooms, staffrooms, senior management teams and local authorities; to enable professional learning by leading and informing practice through, for example, local CLPL sessions in their own schools. Our approach to professional learning draws on complexity and ecological thinking whereby the emphasis is on capacity building, embedded approaches, reflective practice and an emergent rather than linear process of delivery where the content and outcomes are partly shaped by those teachers working with us on our programmes (see Keay *et al.* 2019) for a discussion on complexity and ecological thinking in terms of teacher professional learning).

Members of the author team (Christie, Higgins and King) are engaged in a research study which considers these assignments as data and looks more closely at the stories being told and not being told at subject, class and whole-school levels. This research is ongoing. At this stage having worked closely with the data in its submitted form as course assignments, we have, through a process of reflection surfaced two key observations:

1. to engage effectively with LfS it is important that teachers accept the fundamental complexity inherent in both 'sustainability as a concept' and the teaching/learning transactions around this; and

2. teachers have to engage in the change process explicitly highlighted in the LfS definition (Scottish Government 2012), through considering and adapting their personal approach to the purposes of education and their own professional practice.

REFLECTIONS: COMPLEXITY OF CHANGE

These three lines of enquiry surfaced two key concerns related to the difficulty of engaging with complexity and change. First, there are clear tensions related to grappling with the complexity and conceptualisation of sustainability education, and its attendant values stance; this is problematic as it does not entertain moralistic plurality or divergent values and motivations. So a tension exists, as it does in much of sustainability education (see Postma & Smyers 2012), whereby we encourage students to bring a 'newness' to the world and to envisage and co-create futures, while at the same time we find ourselves operating within or alongside a school system that encourages them to conform to the rules of the educational order we have created. In terms of LfS it can be understood as offering an 'invitation to imagine', yet the imaginings are bound within an educational system that begets conformity and normativity. This tension surfaced within the CCLfS assignments and in our own discussions with teachers where, on one hand, LfS was viewed with excitement in terms of the pedagogical possibilities it could afford, yet on the other, it was deemed problematic as possibilities can bring complexity in terms of 'fitting' into the current systems, established routines and modes of delivery.

Such responses are not uncommon when discussions about change unfold; and they are not confined to education. Sterling (2012) suggests that when faced with change 'many people are likely to hold onto – even retreat into – the security of what they know and believe, rather than willingly embrace uncertainty and possible loss of familiar identifiers' (p.513). In terms of education, and drawing on our experience of working with teachers and the LfS agenda since it's conception, this response is evident. It may simply be that some teachers do not see their subject explicitly placed within the LfS agenda – prompting one teacher to say 'what has LfS got to do with me?' (Kirk, 2017). Priestley and Phillipou (2018) recognise such disassociation and suggest that if teachers 'do not fully comprehend the goals and form of new policy, then their efforts to "implement" will invariably fall back on existing practices and ways of thinking' (p.154).

Second, it appears that whilst LfS has been recognised as a feature of policy, it is viewed by busy teachers as simply another educational trend with a heavy top-down agenda. Wallace and Priestley (2017) have long considered issues of educational policy development and enactment but have done so more recently in terms of teacher agency. They, like Sterling, suggest that there can be resistance to macro-level policy formation in the form of agentic behaviour such as resistance to policy or compliance without critique; forms of which we have encountered whilst working with teachers through anecdotes such as 'LfS has nothing to do with me' and 'LfS is dealt with through our recycling campaign on a Friday afternoon'. Such comments suggest that this is not just about teachers' acceptance and enactment of the policy as proscribed, there is a fundamental issue here related to a deeper understanding of the broader social and

educational agenda that provoked the policy formation in the first place. Therefore, in terms of LfS policy enactment, we believe there is a job to do to encourage and support teacher agency 'that is meaningful in the light of the wider questions about the direction and purpose of education' (Wallace & Priestley 2017: 133). This is an important aspect of the move from LfS policy rhetoric to reality as it recognises that space and time are vital to enable teachers and whole schools to consider questions such as how might we engage with LfS? What might that look like in terms of individual classroom practice, school ethos, our learners and the whole school? Further, it suggests that teachers need to have agency not just in terms of how they engage and develop their thinking but how the external conditions, such as the broader social and cultural ecology enable or prevent teachers enacting these ambitions. It is not enough to suggest teachers take time to think about how to develop LfS if the culture and conditions prevent the change or development required or requested by policy. This is a complex matter across all levels of policy formation and implementation, and one that requires support for teachers from pre-service throughout their professional lives as they wrestle with existing and new policies.

These two tensions are not surprising, or necessarily unique to LfS, but they are important to highlight and summarise as an acknowledgement of where the LfS agenda has taken us and where it will need to go next. Also, our key points align with the results of Kirk's single case study of one Scottish secondary school and add weight to the literature emerging from school reform and sustainability policy development globally. Therefore, if taken together the picture looks fairly consistent internationally, nationally and locally for many teachers across many schools in Scotland. So what can be done to move the LfS agenda forward and how do we begin to address the practical implementation of LfS within schools across Scotland and support the move from policy rhetoric to reality?

PRACTICAL STEPS FOR THE FUTURE?

As authors we felt compelled to write this paper to draw attention to the tensions, the difficulties, the confusion that we had heard, felt and witnessed within Scottish education, at all levels, since the raising of the LfS agenda. However, our intention was not to simply present the challenges, we wanted to highlight the opportunities that exist therefore by way of a conclusion we offer four hopeful and practical steps for the future:

1. High Quality Professional Learning.

The positive benefits of high-quality professional learning in providing teacher confidence in the knowledge, skills and approaches required for Learning for Sustainability do exist. We have heard the positive stories through our work with teachers as part of the CCLfS programme which are echoed in an international study for UNESCO the end of the UN Decade of Education for Sustainable Development (Education Scotland 2015b: Laurie *et al.* 2016). However, the report (Education Scotland 2015b) also acknowledges that 'ensuring that every practitioner in Scotland has the understanding, confidence and skills to embed Learning for Sustainability in their practice is a very ambitious target' (p. 15). Access to high quality professional learning, targeted initially at individuals that are motivated to engage and also have the practical ability to make changes in the way they teach and interact with their pupils is an important first step. Whilst it is beyond the scope of this paper to discuss pre-service teacher education provided by Teacher Education Institutions (TEIs) in Scotland's universities, proper preparation at this stage is plainly also crucial (see Nicol *et al.* this issue). Indeed, given the global context, the national policy and professional standards, it does not seem unreasonable to argue that those considering entering the profession should be well-aware that they will need to embrace LfS (along with other 'responsibilities of all'). This necessarily places an expectation on teacher educators too (see Day, McKee *et al*, this issue).

2. Motivated staff working with others.

Motivated teachers are best-placed to influence other members of staff, both within and beyond their own schools and to work with others to integrate Learning for Sustainability in their practice. This allows each school's individual context to be at the heart of any professional development. Hearing the positive benefits of LfS from confident, motivated learners that are more open to learning is also likely to engage staff beyond those that are self-motivated. This development of a professional culture around Learning for Sustainability can support all teachers in addressing the GTCS Professional Standards, as discussed

in the opening sections. This recommendation has a strong resonance with the selection and pre-service preparation of teachers through the TEIs noted above (see Nicol *et al.* this issue).

3. Interdisciplinary learning tailored to the needs of the students.

Providing experiences that are relevant to the specific learning needs and local perspectives of learners is vital in ensuring pupil engagement, as well as in building meaningful connections with their surroundings – both the human and the more than human world. Curriculum for Excellence enables schools in Scotland the opportunity to take ownership of the context of learning, enabling school curricula to be tailored to the understandings, experiences and needs of learners, depending upon the locality in which they live. By taking advantage of this, schools have the scope to be able to form positive and mutually beneficial interactions with their local communities, while enhancing the learning and skills development of their pupils (see Gray, Colucci-Gray *et al.,* this issue).

4. Providing leadership and a clear strategic framework.

Working together effectively requires a clear strategic approach, and at every stage the commitment and vision of school leaders is key. Where leaders in the system have benefitted from professional learning, they play a central role in enabling learning for sustainability to grow and flourish. Equally, leaders' recognition of the importance of allocating time and support for teachers to develop their understanding and practice is key in enabling LfS to be embedded at a whole school level.

CLOSING COMMENT: LFS AND ATTAINMENT

Our observations serve to reinforce the complexities discussed by Priestly and Phillipou (2018) related to empowering teachers in the enactment of policy, whilst working within a climate of output regulation, such as is seen within Scotland with its current focus on attainment. We conclude that building teacher agency through engaging practitioners with a deeper understanding of why LfS is relevant to all and what that means both individually and collectively as a teaching profession is key. We believe that there is an opportunity for teacher agency to develop in this area alongside the attainment agenda, as LfS offers a way to work with aspects of the curriculum that are not easily captured through assessment-focused teaching and standardised testing. We contend that we are well-placed to achieve this in Scotland as, since 2014, the Scottish Government has positioned LfS development in Scotland as one of the highest priorities in Scottish education. However, it is not the only agenda, and developing skills that 'bridge the attainment gap' is the dominant focus of emerging policy (Sosu & Ellis 2014). Through our experience, our research and reviews of international literature (Christie and Higgins, 2012) we have identified links between outdoor learning (one of the three core elements of LfS) and improved attainment, but we could contest this emphasis on attainment outcomes as one that may diminish the very principles that LfS is built upon, by conforming to a belief that curriculum enactment should be measurable by output regulation.

We believe that LfS offers a long-term strategy that works towards increasing attainment by addressing some of the broader structural and fundamental issues such as social justice, care, and community building that support and enable people and planet to prosper and in so doing afford nourishing spaces for learning and teaching. Our experiences would indicate that positive impacts on attainment are a by-product of successful implementation of LfS. However, if LfS is seen as merely another means of increasing attainment, then this risks the omission of a deeper understanding and appreciation of LfS, and a tokenistic approach to delivery as a result. Striving to ensure that all of those involved in education, internationally and nationally, at every level truly understand and value LfS is core to its flourishing and so to the flourishing of young people, communities and the wider world in which we all exist.

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