

Faculty of Education



Research in Action

Making the Sustainable Development Goals Real: The Role of Teacher Education in Promoting Quality Education for Sustainable Development and Global Citizenship in Schools

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**LIVERPOOL
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TEESNet



Research in Action

Making the Sustainable Development Goals Real: The Role of Teacher Education in Promoting Quality Education for Sustainable Development and Global Citizenship in Schools.

Special Issue August 2018

Editor

Associate Professor Philip Bamber

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Editorial

Research in Action

Special Issue 2018

Editorial

This Special Issue of Research in Action comprises papers presented at the 10th annual Teacher Education for Equity and Sustainability Network (TEESNet) conference held at Liverpool Hope University in September 2017. TEESNet aims to share research and practice to develop new understanding of Education for Sustainable Development and Global Citizenship Education (ESD/GCE). The 2017 conference, 'Making the Sustainable Development Goals Real: The Role of Teacher Education in Promoting Quality ESD/GCE in Schools', was attended by over 100 delegates including teacher educators in universities and schools, educators in NGOs, researchers, policy makers, classroom practitioners and those engaged in informal educational settings.

ESD/GCE has been explicitly identified by UNESCO as pivotal to meeting Target 4.7 of the UN's Sustainable Development Goals (SDGs) and for ensuring quality education that promotes the knowledge, skills and values to meet the challenges identified across the SDGs. Teacher education is recognised to be central to this endeavour. However, the holistic vision underpinning the SDGs requires a unified approach whereby education officials, policy-makers, educators and curriculum developers work closely together. It requires learning through addressing real societal challenges in local contexts whilst recognising the inter-relationship between the local and the global.

The 2017 TEESNet conference therefore investigated notions of quality in relation to ESD/GCE, what this means in divergent local, national and global contexts, and possibilities for realising the holistic ambition of the SDGs. Conference contributions focused on the following themes:

- What does 'quality' mean in the context of the SDGs? What kind of knowledge, skills and values are relevant to ESD/GCE in teacher education and schools?
- How is it possible to localize the SDGs and ensure relevance through research, policy and practice in teacher education in the context of universities and schools?
- What opportunities exist to develop synergies and convergences in ESD/GCE across local, national, European and global contexts?
- How can ESD/GCE respond to the SDGs in ways that equip teachers to address the challenges of changing political and societal contexts, including those of nationalism, identity and values?

TEESNet's commitment to connect research, policy and practice was evident across diverse keynote presentations, practitioner workshops and paper presentations. This included a keynote from Ms. Irmeli Halinen, Head of National Curriculum Development, National Agency of Education, Finland, that explored Finland's approach to the SDGs. Irmeli proposed a set of features indicative of education systems that promote equity, equality and high quality, illustrating how sustainability can become embedded in teaching and learning through curriculum reform. Harriet Marshall, National Leader on the Global Learning Programme in England, shared a practitioner's view of the opportunities (and challenges) of the SDGs for schools, teachers and students. Her keynote presentation drew upon examples of practice in the UK and beyond, focusing on the need to both raise awareness but also deepen critical engagement with the SDGs. Harriet was joined by Alison Bellwood, Director of the Worlds' Largest Lesson (WLL) at Project Everyone. The

WLL is a UNICEF supported initiative to encourage children and young people to support the SDGs. Alison set out how partnership between UN agencies, Governments, NGOs and the private sector has enabled WLL to reach children across the world, making the SDGs 'part of the fabric of their lives'.

These keynote presentations were complemented by the following workshops that provided opportunities to relate discussions of research and policy to practice.

- *Why We Teach the SDGs and How... - Susan Bush, Torriano School and Global Learning Programme Expert Centre*
- *We've got the whole world in our hands... - Vikki Pendry, Curriculum Foundation*
- *Practical Ways to Increase Awareness of the SDGs in Schools - Josephine McLaughlin, International Development Education Association Scotland Carolyn Wills, West of Scotland Development Education Centre*
- *Whose SDG's? Some challenging considerations underlying effective teaching and learning - Debbie Watson, Cumbria Development Education Centre*

This Special Issue includes articles from the paper presentations that also took place at the conference. In their paper 'A Rounder Sense of Purpose: towards a pedagogy of transformation', Paul Vare, Richard Millican and Richard de Vries report on a six-country EU-funded project developing an accredited framework of competences for ESD. Their work distinguishes between ESD 1, promoting informed behaviours and ways of thinking, and ESD 2, building capacity to think critically about and beyond sustainable development concepts (Vare and Scott, 2007). They conclude that the SDGs offer the educator content and context (ESD 1), but cannot in themselves develop educators who have the competence to facilitate criticality (ESD 2).

Opeyemi Osadiya and Paulette Luff argue early childhood educators must be at the heart of policy and practice for 'quality' ESD. They draw upon foundational theorists such as Froebel, Montessori and McMillan, alongside contemporary research such as Nel Noddings' ethics of care, to elucidate how knowledge, skills and values develop through educators' formal and informal interactions with their social environment. Their action research project demonstrates how practitioner insights, attitudes and behaviours towards sustainability emerge through 'care-full pedagogy' (Luff and Kanyal, 2015) that requires attentive, attuned relationships with children. This builds upon ideas in the article by Mallika Kanyal, Paulette Luff and Opeyemi Osadiya, on 'Advocating for democratic, participatory approaches to learning and research in early childhood'. The team from Anglia Ruskin University provide two case studies that explore relational pedagogies and foreground learner-centred methods: one in early childhood education and the other in higher education. This research demonstrates how curriculum, pedagogy and assessment for ESD/GCE must be both orderly and dynamic, attending to relational learning between students and teacher through critical reflection and active learning.

Restorative Practice (RP) provides a pedagogical method that cultivates such relationships, through nurturing skills of listening, empathy, respect and responsibility for actions and behaviours. Rosalind Duke, Dublin City University, Ireland, explores the linkages between RP and GCE and the challenge of embedding RP within initial teacher education. This is particularly pertinent to this Special Issue given that SDG 4.7 suggests 'the promotion of a culture of peace and non-violence' must underpin quality education. The paper concludes that while peace itself cannot be taught, we must prepare young people and educators to live with complexity and to deal with controversial issues

Ronald Johnston reflects upon his involvement in the production of a UNESCO guidebook to support textbook authors to embed ESD into core subjects at secondary and primary levels (UNESCO / MGIEP, 2017). His paper discusses the challenges of embedding ESD in textbooks as authors strive to meet the aspirations of SDG 4.7, highlighting the importance of incorporating learner centred research and enquiry aligned with the principles of ESD. This paper draws upon the findings of an extensive international collaboration that examined curricula worldwide. While Johnston makes clear the resultant guidance seeks to support current curricula rather than promote radical curriculum change, he does identify opportunities to advocate for curriculum reform through the medium of textbook authorship.

Networks, be they local, national, regional or international, play a pivotal role in sharing expertise and influencing policy-makers to embed teacher education for ESD/GCE (Bourn, Hunt and Bamber, 2017). Åsmund Aamaas and Tuva Skjelbred Nodeland report on the experiences of Spica, the Nordic network for teacher educators and teacher students, with participating institutions from Finland, Sweden, Denmark, Norway, Faroe Islands, Iceland and Greenland. As found within networks elsewhere (Bourn, Hunt and Bamber, 2017), Spica depends upon a core group of dedicated and passionate ESD/GCE champions. Their regional case study concludes that using local contexts for learning about global issues is particularly effective within diverse groups where not everyone is 'local'.

This Special Issue concludes with two papers reporting on attempts to embed the SDGs through innovative practice. Elena Lengthorn shares action research that sought to 'localise' the SDGs within a large provider of teacher education in England. Her study explores the knowledge, understanding and attitudes towards the SDGs among beginning teachers, with a particular focus on embedding the SDGs within subject areas. John Patterson, Colleen Loomis, David Brigden and Alison Patterson describe a model of an 'education and enterprise village' that has proven to be particularly effective in the context of a specialist school for sensory impairment and other special educational needs and disability. The three inspirational project based case studies illustrated in this paper integrate ICT, reverse inclusion and service-learning to address important challenges facing society.

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Keynote Presentation

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#TeachSDGs: From raising awareness to deepening engagement and action

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INTRODUCTION

For many years I have been trying to explain global learning or development education to others. My elevator pitch has improved, but I think it fair to say that the task is never straightforward – whichever overarching term I use invites debate, and there is no simple way of explaining the many levels of thematic and pedagogical complexity associated with that term. The UN's Sustainable Development Goals (SDGs) have helped us global educators communicate what on earth it is we all get up to every day because they present a clear (and colourful) framework for action. To illustrate, I spent a while struggling to explain global learning to a newly qualified teacher recently. It was only when I got out my little credit-card sized SDGs table and used this language that the 'aha' moment came.

The global goals are the **why** of global citizenship education (or GCED) and education for sustainable development (ESD). In the UK we have a strong body of development education, ESD and GCED educators and activists to support with the **how**. That said, teachers and students are also imagining and creating their own theories of change, innovation and impact in a social media and technologically savvy way.

The SDGs are immense, the challenges they identify are intimidatingly huge, and their targets are sometimes contradictory. Schools, teachers and students have to decide what particular issues – the **whats** – that they are going to focus on. Over the last 18 months I have been collecting examples of amazing teacher, young people and school engagement with the SDGs (aka the Global Goals) in England. For many of these schools, the SDGs have been an effective framework for mapping and capturing the work they have already been doing in areas such as human rights education, global citizenship education, environmental education, or education about social justice. What makes some of the current activities slightly different from what has gone before, is that the initial simplicity of message has allowed for a more accessible and all-inclusive approach to engagement with SDG topics.

In early 2017 I became involved in a global educator movement called #TeachSDGs. This has now expanded to huge numbers of teachers linking up around the world. With 15K twitter followers, we have launched 150 strong ambassador programme in over 30 countries, and we have seen very exciting international organically-emerging collaborations, partnerships (for example with the World's Largest Lesson) and projects. Whilst policy makers, academics and others are working hard to produce recommendations and engaging in the important but time-consuming task of deciphering how to monitor 4.7, a movement like #TeachSDGs is getting on with the job – and time-pressed teachers convey how motivated and energised they have been by new multi-stakeholder, global collaborations.

WHY ARE THE SDGS SO IMPORTANT?

In April 2017 I wrote a piece entitled *Teaching the SDGs – 17 Goals to transform our world and our classroom*. It identified 10 reasons for engaging with the SDGs in schools, summarised here:

- Teaching the SDGs bridges subject divides – to understand the causes of poverty (SDG1) we need to be both sociologists and historians, for creating ways of delivering clean energy and climate change (SDGs 7 and 13) we need to be geographers, engineers and scientists. SDGs can be powerful tool for encouraging collaboration and mutual appreciation across disciplines.
- The SDGs can be a unifying golden thread for schools – they place human rights, values, human responsibility, sustainability and wellbeing at the heart of learning, things often already there but not necessarily linked together
- Teaching about the SDGs can be an excellent way of addressing controversial and complex local, national and international issues. In the UK we have seen examples of global learning support SMSC (spiritual, moral, social and cultural development), citizenship and PSHE (personal, social and health education) curricula. From healthy living and wellbeing, to gender inequality and conflict, the SDGs are a useful 'way in'.
- Learning about the SDGs is ageless. The Global Goals are as relevant and new to teachers as they are to students. Teachers and students are discovering more about each Global Goal in partnership. Learning about the SDGs is becoming an empowering form of CPD for teachers. Each goal emphasises the need for everyone to engage in life-long learning.
- There has to be collective ownership of the SDG agenda – this necessitates intergenerational, local-national-global and cross-organisation partnership. No one person or organisations owns the agenda, we are all stakeholders. But there in might also lie a big problem, when everyone owns a problem or issue, there's a danger that no-one will!
- The SDGs are a useful tool for supporting Key Stage and Primary-Secondary school transition for both students and teachers. Schools are taking the opportunity to do global learning themed transition projects, such as global weeks where secondary school students visit primary and vice versa, to share their learning, discoveries, critiques and plans for action.
- Sharing learning about the SDGs can engage parents as well as communities and businesses. Some schools engaging with SDGs have taken the opportunity to have pupils present their learnings to parents and the wider community who may never heard of the Global Goals before.
- Teaching about the SDGs is becoming a global trend on social media and is connecting teachers and schools around the world. Whether through the #worldslargestlesson, #TeachSDGs or #GlobalLearning, a growing number of teachers are organically collaborating and connecting across the world to discuss pedagogy, resources and innovation in teaching about the SDGs. For any educationalists concerned about climate change denial or any ideological moves to the right in their national system, learning about the SDGs occupies a transnational space beyond national boundaries and limitations.

- Teaching about the SDGs requires creativity and innovative practice – it invites young people to engage in inventions and enquiries with real-world application. Problem-based learning (PBL) and Philosophy for Children (P4C) approaches work well. Space for creativity and innovative practice can be motivational for teachers
- Engaging with the why, what and how of SDGs maps onto core 21st century skills of importance to schools. These skills and competences also link overtly to the new OECD/PISA 2018 Global Competence framework.

HOW: COMMON THEMES EMERGING FROM #TEACHSDG ACTIVITIES IN SCHOOLS

There are a number of key elements to most SDG-related activities that I've identified from school practice. I mostly draw upon examples from schools in England that have been involved in the Global Learning Programme England, a government funded programme of global learning support for schools (www.glp-e.org.uk), but I am not speaking on behalf of the GLP – there are many schools that have been actively engaged in #TeachSDGs work independently of this or through other programmes, as is evident in the papers and workshops at this conference.

First, *the SDG framework is often used as the starting point* to engage students, school leaders, and other staff. It is also used as a framework to map what sort of global learning activity is already going on in the school – locating other projects, curriculum subjects, teachers, students and community links that are already addressing some of the SDG goals.

Second, *the core values of the SDGs are often linked to schools' pre-existing values* and ethos statements. Schools that aim to achieve a broad and balanced school curriculum regularly make reference to human rights, wellbeing and/or responsible action, and the SDGs link easily to these.

Third, *the idea of a global learning 'journey' is often at the heart of approaches* to engagement with the SDGs in schools – especially those that build in models of behaviour or attitudinal change, and knowledge development. A key opportunity of engaging with the SDGs is that students and teachers are on a fairly equal footing when it comes to prior knowledge of the SDGs. In fact a recent @MYWorld2030 survey found that youth around the world are more familiar with the SDGs than older generations.

We are all on an SDG learning journey, whatever our age or nationality, some of us will be finding out about them for the first time whilst others will be already embedding them in practice and moving to action. It is therefore helpful to reflect upon where we are on the learning journey for different aspects of #TeachSDGs work – nb processes are rarely linear or hierarchical as the infographic here might imply. Also, I urge us to try not to judge those that might be working more in the awareness-raising area against a deepening engagement or moving to action criteria. We all need a game plan, but it needs to be realistic. Let's not forget that 1 in 10 people know about the SDGs in the UK.

Attached to every idea of a journey is the idea of change. I believe theories of change work best when people feel that they have co-created them, or at least adapted them, so that they own the method and co-author the strategy. The SDGs are about changing practice, but we cannot individually do everything – we have to choose and prioritise what has a good chance of being successful.

Fourth, a number of schools have found that the *SDGs provide a useful framework for bringing in more complex or controversial local or national issues* into the classroom. Issues relating to racism, xenophobia, islamophobia, hate-crime, terrorism, gender inequality, and local poverty (topics often brought up by students themselves) can be addressed through the SDGs or global learning more generally in that they can support helpful, distancing pedagogic strategies.

Finally, many *methods of engagement with the SDGs in schools are aligned to critical thinking* and the need to promote associated pedagogies like critical literacy and critical numeracy. For example, some schools involved in global learning in the UK have worked with Philosophy frameworks such as SAPERE's P4C.

There are a number of models of practice in schools which can be identified. The most common one appears to be ***whole school awareness-raising with class or year group SDG specialisation***. Here the 17 SDGs are introduced to the whole school or entire year groups (through school assemblies e.g. resources from the World's Largest Lesson). Year groups or classes then focus in on one or two goals. Students engage in group research projects, activities and actions and report back to others at the end of the project term.

Another dominant model involves ***linking to other global learning activities and outside organisations***. The goals are introduced through other related pre-existing global learning projects (e.g. Send My Friend to School, Eco-schools or Rights Respecting Schools), activities (e.g. international school links) partnerships, and engagement is linked to these themes. Often this involves hooking into the human stories behind the SDGs.

I have also seen some fascinating ***National Curriculum and subject-focused SDG work***. The 17 SDGs are used as a framework for deepening and developing subject engagement with global issues. Including cross-curricular and interdisciplinary collaboration through SDG-themed projects (e.g. approaching Goal 13 from a mathematics, Design & Technology and arts perspective in two Bristol secondary schools) supporting global competences.

BUT IT'S NOT ALWAYS EASY!

Of course it is important to recognise that #TeachSDGs activity never happens overnight and regularly meets challenges. UK schools are under strain as a result of funding cuts in real terms, teachers leaving the profession and associated time constraints. Some educators also feel inundated by external agendas for schools and struggle to find the time for new initiatives – even if these initiatives might strengthen existing priorities, enhance learning, and support a broad and balanced school curriculum.

Other tensions associated with engaging with the SDGs in school relate to challenges within global learning more generally. For example, the tension between a focus on individual development and action, versus collaborative action; the potentially intimidating and overwhelming nature of the facts, figures and stories of the SDGs; and the dilemmas of engaging with stereotypes and perceptions, to name but a few!

One way in which UK teachers have been fortunate is through the additional support that they can receive from outside global education organisations and NGOs, and programmes like the Global Learning Programme (GLP). This support manifests itself as materials and websites, but often teachers and schools most appreciate the support they receive in person through global learning advisors, CPD providers and outside speakers. Another successful strategy has been when schools have linked up through global learning school

networks to support each other, share practice and engage in SDG related partnership projects. Finally, it has become increasingly important to collectively generate evidence in global learning and engagement with the SDGs, so that we can both support reporting on Goal 4.7 and individual school aims to show progress and impact.

SOME INGREDIENTS FOR SUCCESSFUL #TeachSDGs PRACTICE IN SCHOOLS

I end with a quick summary of a few recommendations for effective #TeachSDGs practice in schools:

- Use the SDG framework to map and link whole school and curricular activities - consult UNESCO Education for SDGs documents e.g. Education for Sustainable Development: Learning objectives and Textbooks for Sustainable Development: A guide to embedding
- Connect SDGs with core school business, curriculum, values and ethos (so that it is not a bolt-on).
- Take advantage of the many written, digital and human resources out there for supporting teaching the SDGs (start with the resources provided by the World's Largest Lesson, search the www.globaldimension.org.uk resource database, and engage outside school expertise and support from ESD/GCED organisations such as Development Education Centres).
- Envisage SDG engagement as a learning journey, where you want to go deeper consult global education research and theories (the International Journal for Development Education and Global Learning is now free to access).
- Encourage students to lead SDG projects and for these projects to have both local and global dimensions.
- Secure the support of senior leaders (including the Head Teacher).
- Incorporate the human stories behind the SDGs to support empathy and awareness of perspective.
- Collaborate with other schools and teachers locally and globally.
- Use SDG framework to identify and support areas of teacher interest and motivation.
- Create space for SDG-related professional development – there are a number of online and in-person courses available.
- Create and support student ambassador programmes with internal and external reach.
- Share work and projects with parents and the community to raise awareness.
- Build in impact measurement frameworks to help support the monitoring of Goal 4.7.
- Use the SDG framework as a stimulus for creativity, innovation and out-of-the-box thinking.



What we are Researching

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A Rounder Sense of Purpose: towards a pedagogy for transformation

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INTRODUCTION

Even as the Sustainable Development Goals (SDGs) were being formulated Sterling (2014) warned that: 'in the sustainable development debate, the key role of education in realizing sustainable development is often ignored, downplayed and underestimated—or viewed in isolation from the other instruments of change' (p.90). The principal thrust of Sterling's argument is that change cannot take place without learning and learning is an inevitable component of any lasting change. To ignore or downplay the role of education in achieving the SDGs therefore, is to risk bringing about change that is itself not capable of being sustained.

The global effort to achieve sustainable development has implications therefore for (a) what is taught and (b) the way that education is conducted. These two sides of education for sustainable development (ESD) have been described by Vare and Scott (2007) as ESD 1: promoting informed behaviours and ways of thinking and ESD 2: building capacity to think critically about and beyond sustainable development concepts. Sterling (2014) claims the first approach calls for transmissive pedagogies whereas the second demands a transactional pedagogy, based on dialogue. It is essential for ESD 1 and ESD 2 to be combined in order to fully inform and engage learners, which can in turn lead to transformative learning. While the SDGs offer the educator content and context (for ESD 1), they cannot in themselves develop educators who have the competence to facilitate critical ESD and global citizenship (ESD 2).

DEVELOPING COMPETENCES FOR ESD EDUCATORS

To address this concern, a number of efforts have been made to develop frameworks of competences for ESD (Sleurs 2008; UNECE 2012; Weik et al. 2011). This article introduces a three-year, EU-funded project called A Rounder Sense of Purpose (RSP) that is developing an accredited framework of competences. This is being tested through bespoke educator training programmes among approximately 400 pre-service and in-service educators in six European countries led by the following institutions:

- University of Gloucestershire (UK)
- Frederick University (Cyprus)
- Hungarian Research Teachers' Association (Hungary)
- Italian Association for Sustainability Science (Italy)
- Duurzame PABO (The Netherlands)
- Tallinn University (Estonia)

The project is building on the United Nations Economic Commission for Europe framework of educator competences for ESD (UNECE 2012), which remains underused in a practical sense possibly because the UNECE competence statements are not written as assessable competences with clear links to learning outcomes. Furthermore, the number of statements appears rather unwieldy and includes some duplication.

Since early 2016 RSP partners have worked on distilling the UNECE competences to reduce the number, removing repetition and identifying gaps. This was done with reference to other significant work in the field including Roorda (2012) who developed the RESFIA+D framework and the work of Wiek et al. (2011) that informed UNESCO's (2017) eight competences for sustainable development.

The resulting framework of 12 competences (Fig. 1) is sub-divided into learning outcomes but it was decided not to break this down further into skills, values, knowledge, etc. for two principal reasons:

1. This atomises learning into discreet components that appear meaningless in the context of sustainable development and undermines the notion of holistic thinking that underpins ESD
2. More pragmatically, there is no Europe-wide agreed format for such qualifications, rather each national qualification framework uses its own template for itemising assessable learning outcomes, therefore defining the award at this level of detail would make it more difficult to apply across Europe.

Rather than a detailed breakdown of attributes, the RSP framework provides a set of underpinning components linked to the learning outcomes that in turn relate to the twelve educator competences. RSP also suggests training activities that will help to develop the underpinning components and learning outcomes.

The RSP competences can be applied to various International Standard Classification of Education (ISCED) levels; the RSP partners agreed programmes could be offered from Levels 4 to 7. At any given level there are three stages, which might be defined as 'degrees of engagement and development'. The first of these stages is simply an acceptable level of participation in any given training programme related to the framework, the second stage requires a demonstration of some practical application of the competences while the third stage calls for an effort to facilitate change in others or within one's work setting.

Thinking Holistically	Envisioning Change	Achieving Transformation
Integration:		
Systems Competence The educator helps learners to develop an understanding of the world as an interconnected whole and to look for connections across our social and natural environment and consider the consequences of our actions.	Futures Competence The educator helps learners to explore alternative possibilities for the future and to use these to consider how our behaviours might need to change.	Participation Competence The educator contributes towards system level changes that will support sustainable development and develops their learners' ability to do the same.

Involvement:		
Attentiveness Competence The educator alerts learners to fundamentally unsustainable aspects of our society and the way it is developing and conveys the urgent need for change.	Empathy Competence The educator is considerate of the emotional impact of the learning process on their learners and develops their self-awareness and their awareness of others.	Engagement Competence The educator works responsively and inclusively with others, remaining aware of their personal beliefs and values and develops their learners' ability to do the same.
Practice:		
Transdisciplinarity Competence The educator acts collaboratively both within and outside of their own discipline, role, perspectives and values and develops their learners' ability to do the same.	Innovation Competence The educator takes a flexible and creative approach using real world contexts wherever possible and encourages creativity within their learners.	Action Competence The educator takes action in a proactive, considered and systematic manner and develops their learners' ability to do the same.
Reflection:		
Evaluation Competence The educator critically evaluates the relevance and reliability of assertions, sources, models and theories and develops their learners' ability to do the same.	Responsibility Competence The educator acts transparently and accepts personal responsibility for their work and develops their learners' ability to do the same.	Decisiveness Competence The educator acts in a cautious and timely manner even in situations of uncertainty and develops their learners' ability to do the same.

Fig. 1 The Rounder Sense of Purpose Competence Framework

At the time of writing project partners are in the process of developing pilot training programmes for a total of approximately 400 pre-service and in-service educators to commence in October 2017.

ASSESSING THE LEARNING

A key issue for project partners is the development of assessment tools and techniques that achieve constructive alignment (Biggs 2003) with the pedagogical approaches being promoted by the competence training programmes. In discussion with learners on a small pilot programme run in the UK in 2017, it was suggested that assessment might include an assessment of:

- Presentation and discussion of one's work with the competences including a question and answer session
- The learner's engagement in the discussion/question and answer sessions of their peers
- A portfolio (written or other media) that demonstrates a level of engagement with each of the competences

The first two approaches rely on dialogue and reflect an open-ended approach to assessment that allows for external influences and unforeseen outcomes. Assessment

of these would be carried out by the student themselves and by their peers with the facilitator/assessor focusing on the engagement of all learners in the dialogue. The portfolio may be in the form of text or other media; this is to be used to assess the degree of engagement with the twelve competences of the RSP framework in a more structured manner. In this way, the assessment approach lies somewhere between order and chaos, a key feature of successful complex adaptive systems. By using different methods and approaches to assessment, and in effect triangulating, it builds a broader and more reliable picture of the learner's competence and compensates to some degree for the fact that all assessment is based on inference and thereby incomplete (Mislevy 1995).

AN ACTION RESEARCH APPROACH

This brief discussion paper outlines one strand of the research that is proposed by RSP's UK-based partner. Other project partners are being invited to respond to this proposal so that ultimately a unified approach to assessment can be agreed. The research question seeks a means of identifying how education in the RSP competences has affected the learners. Students may acquire a degree of knowledge and skill by attending a learning programme but determining the extent to which this leads to *affective* change is not straightforward. Students learning to say – or even do – the 'right' things represent what Wegerif (2011) terms *horizontal* learning. For Wegerif (2011:184), horizontal learning is about how we become socialised into different group norms but 'does not account for how we might learn to become more aware of our identifications in order to question and transform group norms.'

This learning is a function of horizontal thinking that can, in turn, be detected through horizontal dialogue. Horizontal dialogue, thinking or learning can be applied to many different things but the *depth* of engagement remains the same even as more knowledge is acquired. We might, for example, gain an encyclopaedic knowledge of the UN's Sustainable Development Goals but this cannot be taken as an indicator of any kind of ethical or values shift. A vertical dimension of dialogue is also required to indicate the quality of how one is learning to think; for Wegerif (2011:184) 'the idea of learning to think cannot be left as a neutral account of processes of socialisation but implies a notion of learning to think well.'

We can detect this quality of learning through dialogue because of the way in which learners *perform* dialogue as if to a third person. Drawing on the work of Bakhtin, Wegerif (2011) suggests that all dialogue is addressed to an unseen super addressee or Infinite Other and it is this that offers the vertical dimension. Vertical dialogue (and thinking and thus learning) occurs in response to new events and across contexts; it is reflective and therefore challenges existing practices. This dimension can be detected through statements that demonstrate critical thinking and may lead to a consideration of underpinning ethical dimensions and values in any given situation.

Returning to our research question, evidence of growth in the vertical dimension of a learner's dialogue could be seen as an indicator of a potential, if not an actual, shift in values. It is expected that a focus on dialogue will allow us to analyse the extent to which students have internalised ideas and modified their thinking. This in turn will provide evidence of transformative learning; what Mezirow describes as 'the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's

experience in order to guide future action' (1996: 162). This learning involves learners reflecting on their 'meaning perspective' and challenging their 'habits of mind' (Mezirow 1992) and thereby potentially shifting their frame of reference (Matthews and Matthews 2014).

During this final year of the project a few things remain to be completed. Project partners will undertake a pilot of the materials and simultaneously trial and research assessment processes. A website will be developed that will provide an overview of the framework, detail of its pedigree and example teaching materials and approaches to assessment. A key challenge remains as to where and how to host the website and materials in the future and whether it is possible to produce a pan-European qualification that has universal currency and appropriateness.

CONCLUSION

The RSP competence framework addresses the need for ESD 2 – pedagogies of transaction; this provides a counter-balance to the more familiar ESD 1 approach – pedagogies of transmission – that explores the content and purpose of the SDGs. Together these approaches have the potential to offer a pedagogy for transformation. A key challenge in disseminating and implementing the RSP approach lies in our ability to assess the level of engagement of learners as they work to gain the ESD educator competences. We trust that a focus on the dimensions of learner dialogue will help us to do this efficiently. Our next step is to work with learners to develop the approach and to research its effectiveness. We look forward to reporting on our findings.

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Putting educators at the heart of 'quality' in early childhood education for sustainable development

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INTRODUCTION

Early childhood educators are at the heart of 'quality' in education for sustainable development (ESD). This includes both the overall quality of early childhood education on offer to children, which is of importance in working towards the Sustainable Development Goal (SDG) Four target to 'ensure that all girls and boys have access to quality early childhood development, care and pre-primary education' (United Nations, 2015), and also the quality of ESD for young children. It is the latter notion of quality in ESD that is the focus for this paper. In England, there is no explicit mention of ESD in the Early Years Foundation Stage curriculum (DfE, 2017) and practitioners are unlikely to encounter ESD within their initial training. Yet ESD is vital for young children, at a stage in their education that is important for their individual and social development and can influence their present and future beliefs, values and actions (Davis, 2015; Engdahl, 2015). In the absence of specific training for ESD, a combination of knowledge, skills and values develop from educators' formal and informal interactions with their social environment and lead to the formation of insights, attitudes and behaviours towards sustainability. This translates into practitioners' pedagogical knowledge as a tool for teaching what they care about. Thus, to consider how practitioners may support children's development of knowledge, skills and values for 'quality' ESD, it is relevant to study practitioners' own developing understandings of sustainability and how these can be promoted (Hill et al., 2014). Here, we explore this in two ways: firstly, through considering practitioners' ideas and their different starting points, in relation to ESD; and, secondly, considering how initial understandings can be developed and applied via collaborative work for ESD within a day nursery setting.

INSIGHTS FROM THE LITERATURE

The significance of early years education, its benefits for young children and potential for instigating social change, was well recognised by its foundational theorists including Pestalozzi, Froebel, Dewey, Montessori and McMillan. All were advocates of active and experiential learning opportunities, mediated by skilful educators. The creative curricula and stimulating indoor and outdoor learning environments and resources on offer in early years settings today have their roots in the ideas of these thinkers. Their pedagogical theories continue to provide inspiration for contemporary pedagogical processes, including approaches to early childhood ESD (Härkönen, 2003, 2009; Luff & Kanyal, 2015; Luff, 2018).

Influenced by the views of these philosophers, it is well-recognised that children benefit from play and access conceptual knowledge via their play experiences. This can be enhanced when they are supported effectively by adults. For children to gain knowledge, skills and values associated with ESD during play, their learning must be facilitated by knowledgeable educators. Children develop play ideas, scripts and roles based upon their existing understandings of the world. They are, however, unlikely to learn many of the complex concepts relating to ESD through their freely-chosen play and may bypass concepts of ESD that are supposedly embedded in play experiences (Edwards & Cutter-Mackenzie, 2013). Rather, educators need to plan for playful experiences, with intentions in mind, in order for children to gain conceptual knowledge relating to ESD. This argument is consistent with Dewey's (1897) belief that, rather than impose certain ideas or form certain habits in the child, the duty of educators is to select influences to affect the child and assist her/him in responding to those influences in their social world. Teacher insight is, therefore, a key factor in organising the conditions under which children learn (Dewey, 1938). Hence, in deciding what a child should learn, it is of utmost importance for educators to understand the concepts to be learned, how children learn and how best to carry out activities in ways that are engaging.

Educators have profound influence on children's education, especially in the early stages, and this can be seen in the curriculum events, activities and opportunities that they design to achieve certain learning outcomes (Sund, 2008). It is a common-sense notion that educators will teach what they particularly care about (Sund & Wickman, 2011) and their personal understanding of a concept or topic will enable them to determine the best way to teach it to achieve desired aims. These insights also direct their approach to learning, as they invite pupils to take part in mutual creation of knowledge. Härkönen (2003) identified that young children can learn sensitivity towards social and environmental issues only if teachers know how to bring them to awareness of issues and support active, compassionate responses. This emphasises the importance of building educators' confidence and their knowledge and skills for teaching ESD. We contend that this is achieved through a combination of eliciting and utilising educators' existing knowledge and skills relating to ESD together with encouraging the development of new insights, in collaboration with others.

As Dewey recognised, educators communicate not only certain intended content, but also a number of other unintended, implicit messages through speech and actions (Sund, 2008). These behaviours demonstrate to pupils what is to be viewed as important, their aims as well as their links to the wider world. Educators' explicit and implicit messages and actions, therefore, influence pupils' understandings of the contexts and content of what is taught and learned. Noteworthy in the implicit actions of educators are caring responses, particularly sensitivity towards children's well-being, and supportive interactions. Their attentive, attuned relationships with children can be theorised as care-full pedagogy (Luff & Kanyal, 2015). This draws upon ethics of care which, as articulated by Noddings (2012), describe a relationship that exists between one person and another for the well-being of that person. Returning to the inspiration of the philosopher pedagogues, caring within early childhood education is important for young children and has potential to extend beyond nurseries and Foundation Stage classrooms as a contribution to a more peaceful, equitable and sustainable world (Luff & Kanyal, 2015). These reflections, upon the knowledge and values of educators that inspire action towards quality in ESD, are extended here through reporting of selected findings from a small-scale research project.

THE RESEARCH PROJECT

The study is an action research project undertaken with 16 practitioners and 67 children over a period of two years in a day nursery in South Essex, UK with the aim of co-constructing understandings of sustainability with and for early years education and care. During face-to-face interviews in the setting, 10 out of 16 female practitioners, with childcare experiences ranging from between 6 months to 17 years, were asked to describe their understandings of ESD using five words (Hill et al., 2014). They were questioned about how their understandings of ESD are developed and put into practice. This formed the starting point for collaborative activities, co-designed by practitioners and children with the researcher, to focus upon different aspects of ESD. These were studied using an ongoing 'pedagogy of listening' (Rinaldi, 2006) whereby participants' voices and comments were captured, together with on-going curriculum documentation, observation of participants' actions, and children's art work. These data were analysed thematically, by the researcher, and findings shared with practitioners as a basis for reflections on children's learning and planning for ESD in the next phase of the action research.

Initiatives such as the project reported here are an attempt to work towards SDG4, through supporting practitioners' to acquire knowledge and skills relating to sustainability. This is intended to build their capacity to work towards achieving the SDG target 4.7 to ensure that young learners in their care begin to experience education for sustainable development.

FINDINGS

Practitioners' responses of their ESD understandings using five words are presented below in a Wordle:



Practitioners' initial perceptions of Education for Sustainable Development.

Wordle is a web tool, whereby text clouds are created using the size of the text to represent word frequency in the source data. The more frequently the word occurs in

practitioners' responses, the larger the word in the Wordle, e.g. environment, recycle, caring, looking [after]. On the other hand, as the word frequency decreases, so does the size of the words proportionally e.g. growing, re-use, planting and love. Using a Wordle to represent practitioners' responses enabled visualisation of trends in their perceptions of ESD, which can be seen to be predominantly basic concepts showing traditional understandings of environmental sustainability rather than awareness of the SDGs or wider political and social concerns.

In addition to using five words to describe their understandings of ESD, findings from practitioners' interviews revealed how their understandings of ESD, at the outset of the project, were developed through socialisation from family, media and the workplace. These initial understandings of ESD, were discussed and linked with their practice, and then practitioners worked collaboratively with the researcher, with one another and with the children, to co-construct further knowledge relating to sustainability and sustainable education in practice. Their responses, and subsequent collaborative work with the children, were analysed through the lens of UNESCO's (2010) four dimensions of sustainable development – natural (environmental), social, economic and political. These dimensions were used in the study because they provided a holistic and integrated approach to data analysis and enabled further explorations of practitioners' approaches to sustainable learning with the young children in their care.

NATURAL (ENVIRONMENTAL) DIMENSION OF SUSTAINABLE DEVELOPMENT

Evidence from practitioners' responses revealed that their understandings of ESD relate mainly to the natural or environmental dimension when they commented that children are supported to do planting in the garden as well as supporting their awareness of where food comes from: 'Allowing children to do planting in the garden; knowing where things come from or how they are grown. Do they grow above or below the soil?' Based on their responses, the researcher worked collaboratively with the practitioners to explore further how their understandings can be drawn upon to explore ESD topics with the children. Following democratic consultations which included children's voices, participants in the study decided to grow a wildflower garden as a basis for co-constructing understandings of environmental sustainability. Individual children were also supported in growing sunflower seeds to foster their understandings of how things grow.



The wildlife garden planted by participants. Planting seeds to learn about how things grow.

Further collaborative working with practitioners on exploring means of understanding and implementing children's ESD learning on the natural/environmental dimension of sustainable development relate to food and gardening which include growing, as well

as recycling of food waste. Children are also encouraged to tidy up toys and other equipment in the nursery environment as reflected in comments made by one practitioner who understands ESD as: *'tidying up, putting things away ...'*

Practitioners use their existing knowledge and skills to promote sustainable development through participation in gardening activities, designed to foster children's sense of appreciation and value of the natural world. Here, practice initiatives can be linked to promotion of education for sustainability as they encourage children's acquisition of knowledge and skills relevant for global citizenship such as taking part in decision-making especially with regards to watering and tending the garden. Although not explicitly stated by project participants, initiatives on the natural dimension of sustainable development can be linked with SDG 15 for 'Life on Land' which has the aims of protecting, restoring and promoting sustainable use of terrestrial ecosystems. Growing a wildflower garden on a disused patch in the outdoors has, on a small scale, the function of restoring and conserving a biodiverse ecosystem of insect and plant life.

SOCIAL DIMENSION OF SUSTAINABLE DEVELOPMENT

The social dimension of ESD was evident in practitioners' responses when they mentioned that ESD is about *'looking after each other and the environment and the animals'*. Hence, in fostering children's skills in this dimension of sustainable development, all adults in the nursery model caring by treating children with respect and consideration whilst, at the same time, encouraging them to support each other within the setting, caring for themselves, others and the environment (Luff & Kanyal, 2015). For instance, older children support newcomers to the nursery using the 'buddy' system, as well as helping to care for the nursery pet rabbit by feeding it with left-over salad and taking it for walks on a leash in the garden. Listening is essential to caring relationships (Noddings, 2012) and all participants listen to one another and are encouraged to use kind words and not hurt others; using *'please'*, *'thank you'* and being sensitive to others' needs. These initiatives reflect comments by one of the practitioners whose understanding of ESD is: *'talking to other people and trying to help others from what they say and their feelings'*.

Here, too, practice initiatives can be linked to promotion of education for sustainability as they encourage acquisition of knowledge and skills relevant for global citizenship. Kindness and the ability to form caring relationships are important qualities of peaceful and empathic citizens who are able to reflect on the effects of their actions on others. These initiatives, therefore, are implicitly aligned with Sustainable Development Goal 16, as they have the function of promoting an embryonic peaceful and inclusive society for sustainable development within the early years setting.

ECONOMIC DIMENSION OF SUSTAINABLE DEVELOPMENT

Responses from practitioners when they commented that their understanding of ESD is about: *'Getting children to understand the earth and the environment. Making sure that things are there in the future, not just in the present'*. Others commented that ESD is about: *'developing on things to last longer'*, as well as *'helping people to understand how to be sustainable'*. These comments revealed strong links to the economic dimension of ESD, especially as they are focused on making things last for longer. This practice was re-echoed in another practitioner's comment that ESD is about *'reusing boxes or yoghurt pots for creative work e.g. junk modelling and cereal boxes for role play'*. In the setting, practitioners and the researcher worked collaboratively to encourage children to recycle or re-use left-over food packages, which revealed the economic dimension of sustainable

development. This dimension was also fostered in the children's learning for ESD when they were supported in self-care skills, as reflected in another practitioner's comments that ESD is about 'enabling children to gain lifelong skills, how to care for themselves and the world'. Hence, the nursery children were supported in self-care e.g. putting their coats on/off; cleaning their noses; washing their hands before meals and after the toilet/playing in the garden; and making healthy food choices.

Further ways of exploring the economic dimension of sustainable development to support children to gain lifelong skills were carried out through activities on road safety where discussions focussed on the need to stop, look and listen, when crossing the roads. The children provided examples of what they do to keep safe: 'I hold both of my mummy's and daddy's hands'; 'Roads are very busy with lots of cars that can be dangerous. That's why we wait for our mummy and daddy'; 'I cross the road with my mum. I hold her hand'; 'We must hold our mum's or dad's hands when walking to nursery' and: 'My mummy drives and I sit in a car seat with a belt'. Afterwards, the children and practitioners worked together in creating a poster showing a busy road with cars and traffic lights. Photos from the poster are presented below:



The busy road with cars and traffic lights.



The traffic lights.

These practice initiatives can be linked to promotion of education for sustainability as they encourage practitioners to reuse product packaging. These types of activities can be linked with SDG 12 as they have the function of ensuring sustainable consumption and production patterns, by minimising waste and pollutants generated in the setting. In addition, reusing materials has the benefit of reducing costs. In addition, supporting children's development of lifelong skills of personal road safety relates to Sustainable Development Goal 3 for health and well-being.

POLITICAL DIMENSION OF SUSTAINABLE DEVELOPMENT

Responses from a few participants revealed the social / political dimension of sustainable development when they described their understandings of ESD as their actions of 'looking after things with respect - developing on it to last longer'. Other practitioners commented that they 'give children stickers or special rewards for being helpful and kind', as well as: 'asking if they are ok, need help, being polite and making sure they are treated equally'. One practitioner commented that ESD means: 'projecting my values to the children e.g. being kind to each other, loving each other, like being proud of differences, being non-judgemental with children'. Another practitioner commented: 'Having golden rules and routines for the children; good team working and everyone working together – staff and children. Good management of staff'; while another stated that 'the children lead the

way'. On the bases of their understandings of ESD, collaborative means of supporting children's learning for ESD were achieved by encouraging fairness to one another, e.g. by following the nursery's Golden Rules which also apply to practitioners; and fostering decision-making skills through being listened to and allowed to lead the way (Luff & Kanyal, 2015). These examples, also arguably fall under the social dimension of ESD.



Image of the setting's Golden Rules board.

Here, education for sustainability is promoted through the continued creation of a peaceful and inclusive culture within the setting, aligning with SDG 16. Treating children with fairness and recognising their achievements especially through the 'reward' system of stickers have the long-term effects of building citizenship values that enable them to appreciate the achievements of others and foster harmonious existence among them.

CONCLUSION

The findings from this small, ongoing, project show that the quality of Education for Sustainable Development that young children experience is shaped by the knowledge, skills and values of their educators. This is not straightforward, as practitioners may lack confidence in their conceptualisation of sustainability and experience confusion when faced with the complex scientific information and ideological arguments for sustainability. The fact that ESD is not prescribed within the EYFS curriculum has disadvantages here, especially that ESD is not a priority within initial training or professional development. Unlike other areas of theory, pedagogy and practice, practitioners are seen to have limited knowledge regarding sustainability and they do not necessarily regard the development of ESD as a necessary area of work.

Nevertheless, the fact that ESD is not a formal requirement within the EYFS curriculum and is not subject to external quality assurance measures means that understandings of ESD and notions of quality can be negotiated and developed in more holistic ways.

This offers possibilities for discussion and experimentation, such as that seen in this small-scale study. There is much further work to be done to identify ways and means to support this most effectively. What is shown here is that, in planning and implementing activities and approaches to promote ESD, practitioners can draw upon their existing understandings, skills and values and can also work collaboratively to further develop and extend their knowledge as a basis for pedagogy and practice for quality ESD.

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Advocating for democratic, participatory approaches to learning and research for sustainability in early childhood

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INTRODUCTION

One hundred years on from the publication of John Dewey's 'Democracy and Education', in this paper we explore aspects of sustainable education with emphasis upon concepts of experience, enquiry, critical reflection and dialogue as a basis for participatory learning and teaching. The aim is to bring forward, and attempt to reconcile, some of the implicit questions that divide education into dichotomous discourses: on the one hand consumerism and marketisation; and, on the other, inclusion, reciprocity and potential for social transformation. Drawing upon DEEEP's recommendations for transformative approaches to education (Fricke et al, 2015) and work towards sustainable development and active global citizenship, we explore relational pedagogies in early childhood education and in higher education and argue for learner-centred, participatory methods. Specifically, we present and analyse two parallel examples from our research and practice, one from the early childhood sector and another from higher education. The first example is from an action research study involving the young children and members of staff for the creation of a wildlife garden, as basis for co-construction of understandings of sustainability, in nursery. The second reports a project in which early childhood studies (ECS) students participated in the development of a learning space in their university. Both are used to illustrate a collegial model of working with early childhood stakeholders and the participatory, relational pedagogical approaches that we advocate.

A CONCEPTUAL BASIS FOR EARLY CHILDHOOD EDUCATION FOR SUSTAINABILITY

Sterling (2001, 2011), in response to challenges to education posed by Schumacher (1973) argues for transformative learning, teaching and educational research. This calls for creative, participatory and collaborative approaches at every level of education (from early childhood through to university and lifelong/lifewide learning). Further, prominence is given to social and environmental concerns, which may challenge institutional values and priorities. This is echoed in the conceptual basis for Education for Global Citizenship proposed by DEEEP which highlights 'the purpose of education as going beyond the acquisition of knowledge and cognitive skills, to transforming the way people think and act individually and collectively' (Fricke et al, 2015: 10). It is in this context that we raise questions for our own practice and research. This paper begins with an exploration of education for sustainability, within early childhood education and in early childhood

studies at university. Working within current systems and processes, with awareness of some of the associated tensions and pressures, the focus here is upon democracy and participation with regard to what is taught, learned and assessed.

Education can be seen as a life-long learning process that supports people in becoming active and competent global citizens. In our context this concerns development of sustainable participatory spaces that help to engender a sense of belonging amongst the participants, as well as promote their ability to relate to the environment and wider community needs. It is the participatory nature of learning which is at the heart of our practice. The co-construction of knowledge amongst various participants not only helps to bring forward the notions of equality through participation and democracy but also places value upon participants' previous learning and experiences. Within participatory learning, 'democracy' becomes a central ethical imperative in education (Dewey, 1903, 1916). Democracy, from an ethical perspective (rather than a technical one), facilitates the building of relationships of responsibility as well as freedom of mind and discovery between students and tutors. If the tutor, as Dewey asserted, shows the power of initiation and knowledge co-construction, the students can flourish within conditions where they develop their individual mental powers and adequate responsibility for their use (ibid). It is on these principles of democracy that we present the following two case studies, which are built on a participatory framework of enquiry, promoting dialogue, critical thinking, reflection and experiential learning, and therefore offer transformative potential to all participants.

CASE STUDIES

Human learning begins from birth and so, arguably, the early years are especially important for education for sustainable development (ESD) as they represent the first and most influential stage of each child's learning life course and also the period during which the foundations of many fundamental attitudes and values are formed (Engdahl, 2015). There is, therefore, great potential to instigate changes for a more sustainable world and a better future from the early years (Pramling Samuelsson and Kaga, 2008; Engdahl, 2015).

In a similar vein, universities are also ideally positioned to make critical contributions to sustainable development through research and teaching (Sterling, 2012). Current tensions in higher education, especially with regards to its structural rigidity, consumerist culture and disassociated research from local realities, point towards consideration of a paradigm shift in learning, teaching and research approaches (Taylor and Fransman, 2004, Carey, 2013). A university's role is not restricted to engineering of employees but encompasses a wider aim of education for change that can assist in the production of complete citizens who are able to think for themselves (Nussbaum, 2010). This can be achieved through the promotion of student participation and participatory teaching and learning (see Seale, et al., 2015; Kanyal, 2014, 2017). In an ECS context, a majority of undergraduate students either aspire to professions where they can work with young children and families, or, are already practitioners in the sector at the time of studying. The prospect of ECS academics working with prospective and current early childhood practitioners, therefore, puts us in a strong position to advocate and build capacity for a participatory learning and working environment that has the potential for transformation, at a community level.

It is within this conceptual framework of participatory learning that both case studies are situated. They are used to illustrate a collegial model of working with early childhood stakeholders and utilise participatory, relational pedagogical approaches. Case study one is an on-going project and the paper refers to its initial findings; case study two is completed and the paper draws more from its reflection and recommendations.

CASE STUDY ONE – ‘A GARDEN FOR THE BEES’

Case study 1 explores opportunities and challenges for monitoring and evaluating education that supports sustainability attitudes and values. It is drawn from action research with practitioners and children in one early years setting. Action research is a social and educational process which offers an opportunity to create forums where people can join together as co-participants in the struggle to remake the practices in which they interact. It is a respectful process of collaborative learning realised by groups of people who desire to change the practices through which they interact in a shared social world in which, for better or worse, we live with the consequences of one another's actions (Kemmis and McTaggart, 2007). In examining what is valuable in the context of ESD, listening to children's and nursery practitioners' voices is of central importance. This is evident in this study where members of staff proposed the creation of a wildlife garden with the aim of attracting bees, an important issue in sustainable development, and this then became a basis for co-construction of understandings of sustainability.

The context

The study is designed in response to calls for ESD to begin from the earliest years of education. Ecological and social crises, overconsumption of limited planetary resources and growing awareness of significant threats to the present and future well-being of humanity require shifts in values, awareness and practices. It is important to start from early childhood in order to lay sound intellectual, emotional, social and physical foundations for development and lifelong learning. Young children are not passive in this process but active agents in creation of better conditions (e.g. see: Davis, 2007, 2008; Pramling Samuelsson and Kaga, 2008; Liu and Liu, 2008; Siraj-Blatchford, Smith and Pramling Samuelsson, 2010; Mackey, 2012; Engdahl, 2015).

Aim

The case study is part of a research study that aims to develop and describe processes through which sustainability thinking, attitudes and practices can be understood and promoted within a day nursery setting. ESD, within the study, is organised in an interdisciplinary and authentic way with children and practitioners. The initial phase involved a wildlife gardening project.

Setting and participants

The case study took the form of action research, in conjunction with nursery practitioners and children from a day nursery, in a town in the East of England. The nursery is run by the Pre-school Learning Alliance, serves the local area and is accessible to all children. It operates from two playrooms and there is an enclosed area available for outdoor play. There were 16 practitioners in total, all female, and 38 children (aged 2-4 years): 13 boys and 15 girls.

Methods

The first cycle of the action research engaged with ESD through a wildlife gardening project. Gardening enables children to connect with nature and to channel their interests in all things living into a genuine appreciation of, and even a scientific curiosity about, their environment (Dewey, 1908; Brook, 2010). As participation and involvement are basic components of ESD, gardening encompasses community learning which lends credence to its power to bring families together in projects that benefit not only children but everyone who participates (Starbuck and Olthof, 2008; Engdahl, 2015).

The gardening project enabled children in the nursery to experience and understand topics linked to sustainable development with support from practitioners. They were encouraged to explore, create meanings and develop skills, attitudes and understandings driven by their own interests and through activities arising from the bee project to support learning with the Early Years Foundation Stage curriculum (DfE, 2017). Children sowing seeds, caring for the wildlife garden and observing insects can then be translated into understandings of the importance of bees to the planet (Friends of the Earth, 2017).

Data collection and analysis

The data collection process was based on Rinaldi's (2006) 'pedagogy of listening' which was adopted to capture participants' voices through dialogic conversations and questioning to generate active engagement. In addition, data was collected through observations, group interactions/interviews and practitioners' reflections. Analysis is in progress and is being developed to explore practitioners' perceptions of ESD and gain understanding of the meanings that participants give to this new, complex and challenging area of work. The action research in many ways mirrored the open-ended project-based approach to learning about aspects of ESD. The project is in its early stages, but it can already be seen that collaborative enquiry-based methods, in which there is openness to contributions from all participants, offer great promise as teaching and learning processes for ESD.

CASE STUDY TWO – AN EARLY CHILDHOOD LEARNING SPACE

The second case study reports another participatory project in which ECS university students participated with staff in the development of a learning space within their institution.

The context

The case study is based in a Higher Education Institution (HEI), in England, which, at a sector level, is undergoing huge changes with regards to standardised and marketised approaches to learning, teaching and assessment (Shore, 2008). Student participation is generally offered through mechanisms such as module evaluations, student surveys and students' representation in various institutional meetings and governance processes. There is, however, a general reluctance from the students towards representational notions of democracy (NSF Annual Report, 2010). Case study two, therefore, offers an alternative form of democracy, drawn from Dewey's ethical imperative (Dewey, 1903) where students worked with staff and with each other to create a shared vision for pedagogy and pedagogical space.

Aim

The aim of the research, from which this case study is drawn, was to analyse the application of participatory approaches in creating a pedagogic space (Early Childhood Resource and Research Room - ECRRR) and analyse the benefits of the methodology for students' learning and professional development.

Participants

Twenty university students studying ECS at undergraduate and postgraduate level, three academics, and an administrator (of the ECRRR) were participants for the case study along with the lead researcher, who is also an academic member of staff. The diversity of membership allowed for collaboration between tutors, students and administrator and took into account the experiences and perceptions of different stakeholders (Richards, 2011) and enabled the researcher to listen to the views of all, instead of a privileged few (Kidd and Kral, 2005).

Methods

Participants' views on the scope and purpose of ECRRR were collected and co-constructed via dialogic working and research group meetings (WGMs and RGMs) where everyone had an equal opportunity to participate. WGMs aimed at drawing upon participants' experiential, practical and theoretical knowledge of early childhood and utilising this knowledge to co-construct an agreed list of resource and research needs for the ECRRR. The RGMs focused upon critical reflection, especially reflection upon participants' own collective decisions (taken in WGMs) which they further reviewed, critiqued and analysed for the needs and purposes of the ECRRR. The intention, overall, was to democratise the whole process of research with the student participants being able to share their views, by using communication media of their choice, for example, in drawing, spider diagrams, verbal communication, written or typed text; and then use these ideas collectively to co-construct, de-construct and re-construct knowledge about ECS pedagogy. The students also filled out a final questionnaire to evaluate their participation in the project.

Findings

The overall findings from the project revealed that the students appreciated the dialogic and co-constructive nature of the project. Participants' agreements and disagreements, whilst debating the resource and research needs of the ECRRR gave rise to co-construction, whereby students were able to negotiate, argue, reflect and agree on the cost effective, time- effective, pedagogical, ecological and collaboration impact of the listed resources and research needs of the ECRRR (see Kanyal, 2017). A combination of co-construction and critical reflection helped to create a participatory learning environment where the students were able to challenge any uncritical views and assumptions (Bovill et al , 2011); develop capacity to participate rationally and critically in group situations (Pant, 2008); avoid generation of false consensus and unequal participation (Veale, 2005) and; above all, due to the sharing of the control of the research process and analysis, felt empowered (Baum, et al, 2006; Kanyal, 2017).

CONCLUSION

The overall aim of our work, such as that in these case studies, is to open up debate about forms of curriculum, pedagogy and assessment that can be both orderly and dynamic, and that pay attention to the subjective quality of children's, students' and educators' experiences. The inclusion of participatory learning, teaching and research offers prospects for experiential learning that place emphasis upon activity-based education where situations can be created for children and students to draw upon their previous knowledge as well as take inspiration from the environment that frames our overall lived experience. Integral to this are opportunities for reflection and action, consistent inclusion of which may demand a reconsideration of routine pedagogical and curriculum approaches. Changes, we argue, as learnt from these case studies, may be achieved by fulfilling three core conditions in our curriculum and assessment. Firstly, by making relational learning associations between students and teacher, built upon more equal grounds; secondly and thirdly, by including elements of critical reflection and active learning in pedagogy and assessment (Freire and Macedo, 1995).

Knowledge construction, if solely left in the hands of market driven initiatives, frames children's and students' experiences within a particular political and economic context, further accentuating consumerism as the dominant conceptual view of education. This restrictive view of education is arguably distant from its academic merit, pedagogical relevance and transformative and sustainable active global citizenship potential, as perceived by DEEEP. To make transformative education a sustainable initiative, we open up a debate to consider more participatory and collective forms of learning and assessment which, based on our experiences, hold potential for developing egalitarian and collegial ways of working together.

The inclusion of participatory approaches can help to stretch participants' learning from the personal to a relational and collective level. Participatory projects can therefore offer educative experiences that can make a difference to the lives and learning of individuals as well as the social and professional community where they live and work, and ultimately to the wider society. The knowledge thus produced may enable the building of capacity amongst our children and graduates to offer more sustainable solutions to the long-term challenges facing society. In short, we argue for meaningful and hopeful approaches that are judged by the opportunities on offer for the present and future growth of individuals and potential for community contributions and positive social change.

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Restorative Practice: modelling key skills of peace and global citizenship

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INTRODUCTION

The difficulties facing our world are manifold – ecological degradation, climate change, ever-increasing inequity – and all these environmental, social and economic problems will increase exponentially the triggers for conflict, as indeed they already are. The need to consider peace and conflict seems then to be central to any discussion of sustainability. Working with student primary teachers in a global education project where diversity - of culture, ethnicity, attitudes, opinions, values - is a constant theme, I am struck by how often we touch on areas of potential conflict but fail to teach, and especially to model, for students how to address conflict. There is a tendency to keep conflict at bay, closing it down if it threatens to get too real, rather than exploring how we might handle it. Increasingly I have turned to Restorative Practice (RP) in my teaching as I have become more and more aware that the skills learned through RP are foundational to notions of citizenship, global or otherwise, and also to the capacity to live and interact peacefully with others.

RESTORATIVE PRACTICE AND RESTORATIVE JUSTICE

Restorative Practice is a set of principles and processes based on an understanding of the importance of positive relationships as central to building and maintaining inclusive community, including processes that aim to restore relationships when harm has occurred. One organisation in Dublin uses this definition: 'Restorative Practice is both a philosophy and a set of skills that have the core aim of building strong relationships and transforming conflict in a simple and emotionally healthy manner.' (TWCDI 2016)

Restorative Practice developed out of Restorative Justice (RJ), which is a way of dealing with offending or challenging behaviour, and which prioritises repairing harm done to people or relationships over the need to assign blame and impose punishment. It aims to 'put things right' by involving all those impacted by an event or situation in a particular form of process.

RP was first used in schools as a way to deal with difficult behaviour in a way that would avoid both the exclusion of the harm-doer and leaving the persons harmed feeling angry or resentful and therefore the school community with unaddressed conflict. Research both in the UK and in Ireland has shown that RP can be effective at this level. A Scottish report found that seven out of eight primary schools showed 'significant achievement' and that the best results were in evidence in 'the small number of schools where a whole school approach had been adopted' (McCluskey et al 2008: 407) and where 'the school had invested in significant staff development' (McCluskey et al, 2008: 415).

More recently, in Ireland, a group of schools in Tallaght, Dublin have also shown the value of RP in improving a range of indicators relating to the well-being of the school community:

Some school staff were initially resistant to RP, viewing it as yet another pressure in an already heavy workload. However, seeing the positive changes and what one participant identified as 'the spectacular results which have taken place due to restorative practice', they now feel that RP is not only beneficial to the children, but it can make the teacher's job easier. (Fives et al, 2013:44).

RESTORATIVE PRACTICE AS SKILLS FRAMEWORK

Nevertheless, a behaviour management focus offers a narrow view of the transformative effect that RP offers in schools and beyond. RP is a proactive approach which aims to build community by fostering positive relationships. It is a set of skills and practices that help to cultivate a restorative mindset which informs how we think, engage, speak, listen, and approach situations, whether in classrooms, schools or in the wider community. It requires a paradigm shift from hierarchy and control to what Lynch and Baker (2005:2) call 'equality of condition' in education, in which they include equality of respect and recognition, of power, and of love, care and solidarity: dimensions which are central to RP.

In restorative classrooms, students, including disruptive ones, are treated with respect, and it has been the experience of teachers, that the respect they show is usually reflected back to them. Teachers model respect by using restorative language – non-reactive, using affective statements, inviting engagement – and restorative processes. For example they begin the day by inviting students to participate in a circle where each person receives respect and recognition for who they are; they use fair process: that is, students can rely on having the opportunity to engage, to explain, or to receive explanation, and to have clarity about expectations which they themselves help to set.

From these processes, students learn to listen actively, to listen for the feelings and needs behind others' words so that empathy can be developed. Restorative processes, by modelling the use of affective statements and allowing everyone a voice, help develop the ability to get in touch with one's own feelings so that these can be expressed in a way that gets heard and understood by others; that is, they develop emotional literacy.

Students also learn from these processes that we all see the world from our own perspective; they learn to 'suspend the notion that there is only one way of looking at something' (Hopkins, 2006:23), and to be able to try to 'see through someone else's lens'. These are basic skills in relationships and in peace-building: not just understandings, but concrete skills which can be experienced and practised. Learning that different perspectives are valid and should be respected and taken into account lays the foundation both for intercultural learning and for the practice of good citizenship.

In listening to others with respect, we can also learn to understand and live with diversity of perspective and opinion – not tying it away, but learning to allow 'contending voices to exist' (Davies, 2017:5-6). 'Peace' has to be able to hold space for a range of perspectives; it is about learning to live with the complexity and diversity, rather than establishing uniformity or even agreement.

When difficulties do arise and a RP conversation or process is used, participants have the opportunity to explore the causes and consequences of actions and to take responsibility

for their own actions. Further, they are involved in finding ways of addressing the impacts of their behaviour; that is, becoming accountable and making decisions as agents of change.

These skills - active listening, empathy, emotional literacy, seeing others' perspectives and living with complexity, taking responsibility and making decisions – are nurtured through the RP framework. But they not only make for more affirmative and constructive classrooms; they are key skills for global citizenship and for the building and maintaining of peaceful relationships and communities. Learning how to approach conflict and to build and maintain peace that recognises diversity of opinion is a valid way to come to an understanding of how peace has to be continually constructed from a just balancing of diverse perspectives. RP becomes a way to explore a situation, and the possibilities arising from it depending on how we proceed; it is a way of learning about and coming to understand perspectives as fluid and in-the-making all the time. It is a way to explore how conflict arises and how it can bring about change if it is opened up, allowed, rather than quelled, shut down and packed away; it is a way of building peace from and through and because of conflict so that students can learn 'new ways... for people to relate to each other, to surface and manage dissent' (Davies, 2017: 6)

LEARNING THE SKILLS OF CONFLICT AND PEACE

'Peace is usually defined as being dependent on the absence of any conflict', and in the way of such dichotomies, the assumption is made that peace is a "good" and conflict therefore "bad". Conflict is set as something that needs to be "resolved"... otherwise there is no peace' (Zembylas & Bekerman 2013:4). This positioning of peace and conflict as opposites means that while education may include teaching about peace, there is no teaching about or for conflict. We cannot establish and maintain peace without knowledge and experience of ways to approach conflict safely and positively, and even more importantly, of how we can prevent conflict escalating into something unhelpful and instead allow it to open up debate for change. Peace understood this way cannot be static – it is always fluid. This is where RP has something valuable to offer in the educational context - as an opportunity to learn how to respect, listen to and engage with different perspectives, and thus to experience peace in the making. For as Zembylas and Bekerman (2013: 10) put it, 'peace education is a set of activities and not a set of abstract ideas – activities in the world and not ideas in the head'.

Peace understood in this way cannot be taught; it has to be modelled, experienced in the making and practised. I would like to draw an analogy here between this 'education for conflict and peace' and the work of psychiatrist Stuart Ablon on Collaborative Problem-Solving. Children pick up skills like problem-solving and tolerance of frustration at different rates, and those who fail to learn effective use of these skills may 'behave badly'; but rather than teach these skills in schools, we tend to punish the children who don't have them. Ablon (2014) equates this to the once-normal practice of punishing children who did not read or write correctly. Hopkins (2011: 195) also discusses the 'tendency of teachers to be judgemental about behavioural errors', as something which 'should not happen' and therefore should be punished, while not in fact teaching the requisite skills for more acceptable behaviour. Similarly, we cannot expect students to learn the skills of listening to diverse opinions, empathising, problem-solving in conflict and so on if we have no way to model and for them to practise such skills.

Further, Ablon points out that each time a child 'misbehaves' in class, there is an opportunity to teach the very skills that child lacks, which can only be learned in the context where they are needed. Similarly, a school classroom presents opportunities on a daily basis where RP provides a framework through which children can learn experientially and authentically about respectful listening, living with diverse perspectives, problem-solving collaboratively, decision-making; all skills in the building and maintaining of positive and peaceful relationships.

PARADIGM SHIFT

Schools have not always modelled these skills. Many schools do aim to promote the values mentioned here and many are nurturing and respectful places. However, when rules are broken or an incident occurs, too often it is the old paradigm of blame and punishment that surfaces; and once this path is taken, effective means for exploring the feelings and perspectives which gave rise to and those which arose from the incident are closed off. Davies (2017: 8) speaks of the need for a new approach in schools which will provide teachers 'not just with alternatives to physical punishment but shifting away from an ethos of punishment and revenge towards more restorative ways of achieving justice in schools'. Research with teachers (Stowe 2012: 123) shows that the letting go of the need to punish an offender presents one of the biggest obstacles to the full adoption of RP principles; many schools espouse RP for daily classroom practice but the school's Code of Behaviour still holds the right to suspend or expel students who do not behave acceptably. It seems that all our learned conceptions of 'justice' depend on punishment. This is at the heart of the very paradigm shift that opens the door for ways of thinking about community that are more inclusive, empathetic, participatory and appreciative of the value of difference. RP moves from thinking of the past to considering the future, from establishing guilt and blame to defining needs and obligations, from punishment to accountability and reparation of harm, with the ultimate focus on the well-being of the whole community and the re-establishment of peaceful relations. If our communities, and humanity as a whole, are to live sustainably and survive, the shift from denouncing difference to being willing to listen and explore that difference is essential, and children in schools can observe and learn that approach through daily experience.

RESTORATIVE PRACTICE IN IRISH EDUCATION

In the Irish context, RP is being used in an increasing number of schools, both primary and post-primary. Many teachers are choosing, or being mandated by their schools, to train in RP, and CPD courses in RP are being offered around the country. Where schools have introduced RP it is often as part of a wider Community Development programme; for example Donegal Education and Training Board received funding from an EU Peace Programme for RP to be rolled out in schools, youth training centres and further education programmes, and Donegal has become a Restorative County. Similarly, other community development organisations in Dublin and around the country are introducing RP in the community as well as in schools.

In West Dublin, the Childhood Development Initiative (CDI) supports RP across the schools in the area and in the local community. Some schools in that area have been using RP since 2007 as part of this wider RP programme in the community; in one school, the staff meet together in a community of practice to reflect on their work, and CPD is offered regularly. All new teachers in the school are required to take RP training. The

principal sees multiple benefits for staff and students, in the life of the school and the community, and is clear that these benefits far outweigh the challenges of introducing and maintaining the RP approach – mostly challenges of time and maintaining commitment. In the wider community many have commented on their new approaches:

One participant commented that she tended to argue more in the past. However, since she completed the training, she 'gives other people a chance' and asks them to recount their version of events ... Many participants were amazed by the power of asking restorative questions such as 'What happened?' ... Another participant has learnt to 'take a step back', to not become as emotionally involved, and as a result is achieving more positive outcomes for the community. (Fives et al 2013:39)

Not all schools using restorative approaches have fully trained all their staff and not all use RP as a fully integrated approach throughout the school. Several have introduced some restorative practices and processes but have not (yet at least) espoused the full restorative spectrum. As mentioned above, evidence tends to show that RP really only makes a *sustainable* impact where the system of RP is carried through the whole school: where all the staff are trained, and where students find themselves in a consistent atmosphere where their voice is respected. Where a teacher, or a small group of teachers, committed to this way of working is or are not supported by a congruent system throughout the school, where students find themselves sooner or later up against the authoritarian application of rules and punishment, it seems inevitable that the impact will be restricted:

A restorative approach within the school or youth work and Youthreach centre should not, then, simply focus on behaviour management and see restorative practice as some form of alternative sanction. A whole system approach focuses on changing the culture and relationships in a school to improve the overall academic and social learning processes and outcomes. (Fives et al, 2013:37)

All evaluations and research into RP in Ireland have included recommendations to develop RP further, both in policy statements, and in developing the RP capacity of staff and young people.

RP is now being taught at 3rd level, to some extent in Initial Teacher Education, but more often in Postgraduate and Masters in Education courses, and this should help in time to raise the research profile. While there have been plenty of process evaluations, there is a dearth of research into the impacts of RP in schools and communities, and funding for such research is hard to come by. Research is needed on the drop in the use of suspensions and expulsions in RP schools, as is qualitative and longitudinal research on the well-being of students and of teachers in RP schools, and on the ability to handle conflict that such students may develop. However, the studies that do exist (e.g. Campbell 2013; Wilson 2011) are clear about the value of RP not only in the school context but in the community as a whole; and anecdotal evidence from those schools which have introduced RP as a whole school approach are almost unreservedly positive about the impact it has had on their students, teachers and wider communities.

CONCLUSION

RP is about building and maintaining the positive relationships which are basic to peaceful co-existence and to peace-building. 'Peace' cannot be taught. We can teach about peace, but to enact peace, first we must accept the reality of conflict, and learn how to approach and deal with it; rather than trying to 'resolve' or 'manage' conflict, we must first explore what it is about, and find a way through the conflict to peace. Peace otherwise is a veneer, a failure to acknowledge underlying conflicts and problems and as such is unsustainable. John Paul Lederach describes peace as 'embedded in justice. It emphasizes the importance of building right relationships and social structures through a radical respect for human rights and life' (2003: 4).

RP offers a way into this, a way for teachers to examine their own behaviours and to critique school structures so that we create schools which model positive and peaceful ways of being and living. Sustainable living demands peaceful conditions and evidence from schools engaging in RP shows that when undertaken as a whole school approach, RP can indeed help us learn and teach how to 'live together sustainably' (UNESCO 2017).

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Achieving SDG 4.7 by embedding sustainability issues into subject-specific texts – a guide for textbook authors.

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INTRODUCTION

Currently, the key role of textbooks is to support national educational policies. All textbooks are subject to periodic revision in response to educational policy changes. Recent policy changes in the UK tend towards instrumental approaches to learning, orientated towards obtaining grades (Oates, 2014, 2010). Inevitably, this reduces the opportunity for a more holistically able approach to learning with a capacity for embedding education for sustainable development (ESD). During the past decade much valuable work in addressing this has been successfully undertaken by key players such as UNESCO and the Georg Eckert Institute for International Textbook Research (for a detailed bibliography of both see - UNESCO, 2014). However, this has not specifically supported embedding ESD in subject specific textbooks across curricula.

It is also worth noting that with increased availability and quality of digital media, the textbook as a primary learning resource may be seen to becoming obsolete in UK (Oates, 2015 p.p. 7-8). However, in contrast to England's on-going 'anti-textbook ethos' (Marsden, 2001/2010), some research would suggest that this may not be universally true. Internationally, the textbook appears to rate as an equal if not newly ascendant partner to its digital counterpart (Mullis, et.al., 2012). In this respect the textbook remains a globally more accessible resource being less dependent on the variable quality and provision of information technology. A Headteacher (Oates, 2014: 3) refreshingly notes that the 'time has come to move away from the idea promoted by some that using a text book is unsound practice' and welcomes with enthusiasm the concept of teacher research groups contributing to textbook revision and development. In the context of addressing ESD this is a welcome signpost to greater opportunities for wider specialist teacher-led and researcher-led engagement with textbook development for greater integration of subject specific knowledge and sustainability issues.

BACKGROUND

Research was undertaken under the auspices of UNESCO: Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP) on embedding education for sustainable development (ESD) in subject-specific textbooks resulted in the publication, *Textbooks for sustainable development - a guide to embedding*. (Johnston et., al., 2017). The author of this paper was lead author for the science chapter and a member of the editorial board for this publication. This paper identifies the challenges and

opportunities that authors may encounter in this pursuit and summarises the guidelines and recommendations developed to support textbook authors and curriculum designers engaged in this important aspect of formal education.

Embedding ESD into formal education to support the goal of achieving the seventeen Sustainable Development Goals (SDG's) detailed in *Transforming our world: the 2030 agenda for sustainable development* (United Nations, 2015, p.p. 14 - 28), is a challenge for education systems globally. This agenda proposes mainstreaming the concept of sustainable development as a central feature and guiding principle in our everyday lives and in society overall. Lending impetus to this, the policy paper *Global Education Monitoring Report* (UNESCO, 2016c), recognises the important contribution that textbooks can make towards achieving this aim by calling on governments to review and revise the content of their textbooks urgently in line with the core values of the 2030 Agenda.

Traditionally, subject specific textbooks have been major influences on many aspects of formal education, supporting many teacher education programmes and classroom practices. This is not surprising since many textbook authors have been/continue to be teachers themselves. However, in many countries - particularly in so-called developing countries - textbook revision is a common and often preferred approach to curriculum development. Frequently, textbooks rather than the syllabus dictate what teachers teach. Additionally, where there is a lack of experience or subject-specific knowledge, teachers rely on 'teaching to the text', taking their structure and presentational values and priorities from textbooks. It follows then, that textbooks can make a significant contribution to achieving SDG 4.7 and that textbook authors have a major role to play in this by initiating and expanding ESD in the early stages of formal education. The following sections consider the opportunities and challenges of authoring a different kind of textbook, where subject-specific knowledge and ESD is meaningfully aligned within the structure of current curricula, in contrast to texts where sustainability issues are included as an 'add-on' to curriculum specifications or relegated to a 'box' in a publication, merely used to enhance the acquisition of subject-specific knowledge.

In considering the form that educational media take, it is also important to note that, although 'textbooks' are referred to throughout this paper, this is not intended to exclude internet based and other digital media. Frequently, these platforms use textbooks as sources for adaptation. However, while iPads and smart phones are ubiquitously available in many parts of the world, reliable networks and platforms used to carry these educational resources are not. This means that textbooks in many parts of the developing world remain a central plank of educational practices which may be passed on from hand to hand and year to year as required, ensuring equitable access to information. There is also much to be said for learners' personalising their learning by 'making friends' with a tried and trusted textbook which they can keep by them for easy reference!

CHALLENGES AND OPPORTUNITIES

UNDERSTANDING SUSTAINABILITY

Sustainability issues are complex. A potential source of bewilderment for aspiring ESD authors is the 'catch-all' nature of the umbrella term sustainable development as used in Agenda 2030 to define multiple issues. On the other hand, this does serve to emphasise the multivariate and interconnected nature of sustainability issues and the wide-ranging cultural backgrounds of the potential readership (and potential authors).

Unsurprisingly then, for textbook authors new to ESD – strong in their own areas of expertise - there remains a lack of confidence about how to relate sustainability issues to their subject. This may indeed also be true for those authors already familiar with ESD when trying to reconcile curriculum requirements with sustainability issues and essential knowledge transfer in order to meet the demands of assessment criteria. Key topics such as ‘peace and conflict’ or ‘global environmental change’, ‘social justice’ and ‘gender equality’ cannot be addressed from the perspective of a single school subject. Inevitably as a consequence, this means there can be no single recipe for embedding ESD into core subject textbooks. Nevertheless, there are many over-arching principles that may serve as a guiding framework; both generic and subject-specific principles were identified in the course of the research underpinning our final publication and these are summarised in Table 1 below (for supporting sources please see subject specific chapters of *Textbooks for Sustainable Development*).

- Ensure sustainability issues are defined and discussed in local contexts, taking into account learners’ experiences and cultural identities while remaining connected with global consequences.
- Promote critical evaluation of sustainability issues from multiple viewpoints.
- Expand global and societal awareness by promoting whole-systems thinking.
- Encourage learner-centred research using growing subject-specific knowledge.
- Emphasize the interconnectedness and multivariate nature of SD issues.
- Connect ‘issue-centric’ ESD to curriculum-based textbook formats and assessment frameworks.

Table 1: Principles to underpin embedding ESD in subject specific textbooks.

Both individually and in various combinations, these principles may already underpin lesson planning for ESD; as a guide to textbook structure and content their use is innovative by promoting a constructivist and issue-centric (thematic) approach to learning. Issue-centric approaches to textbook structure and content identify socially relevant, real-world issues with curriculum content in order to engage students with wider issues of sustainable development (see, Johnston 2017, 82-96). The challenge to these approaches lies in effectively identifying curriculum specifications and assessment requirements within the context of sustainability issues (and vice versa) thus emphasising the need for the meaningful alignment of ESD and curriculum learning outcomes (ultimately, it is to be hoped, within a fully integrated curriculum).

EMBEDDING

Embedding ESD in subject orientated lesson planning has been with us and actively promoted since at least 2006, in Wales particularly, but also within other UK regions to varying degrees of saturation and effectiveness. Much progress and innovation is evident in this field but challenges remain for teachers, exacerbated by a pressured curriculum and lack of appropriate CPD and guidance. Commonly heard is, ‘this is not my subject’ and ‘when do I get the time to apply this?’ from teachers both in the UK and internationally and this is something that curriculum designers and managers must address for the success of SDG 4.7.

Many educators will be familiar with embedding ESD in lesson plans however, with reference to textbooks the term ‘embedding’ is taken to mean incorporating ESD as

an integral element of a textbook's interpretation of curriculum requirements. This places ESD at the core of each subject rather than its being taught on the fringes of the curriculum. Embedding ESD in all subjects ensures a stronger and more effective result going beyond education 'about' sustainable development, giving greater attention to education 'for' sustainable development. Therefore, in line with the principles noted in Table 1 we would propose that:

- embedding ESD is enhanced greatly by aligning the issues being discussed with real life experiences relevant to the learner audience
- embedding ESD should acknowledge the multivariate and interconnected nature of sustainability issues
- embedding ESD should encourage active rather than passive learning by providing the stimulus for analysis, debate, and the proposal of solutions informed by the acquisition and development of subject-specific knowledge.

CURRICULUM LINKS

Globally, there appears to be a gap between aspirations for a sustainable future and practical solutions for achieving this. Embedding sustainability issues into textbooks as a response to SDG 4.7 is an important step towards developing the awareness, knowledge and competencies required by learners to contribute to such a future. Achieving this while maintaining the integrity of the role of the textbook as a primary source of subject knowledge within formal school education is a considerable challenge and requires a multi-faceted approach drawing upon best practice from many sources.

Core subject-specific textbooks are rarely thematic and by definition are rarely multidisciplinary in their approach to presenting material. They are usually structured around blocks of learning organised in a sequence aimed at providing foundational knowledge for later higher level study. Sustainability issues are rarely addressed in the context of the subject-specific skills being acquired by the learner. Most commonly, issues are presented as case studies to aid the acquisition of subject-specific knowledge. Few demands are made of learners to research or contextualize these issues for themselves. To some extent, this is understandable due to current educational priorities of a curriculum which focuses primarily on acquiring subject knowledge for assessment rather than wider development. However, carefully aligning these priorities by including ESD priorities within textbook structure presents a possibility for resolving these problems by achieving both desired outcomes and recommendations for attaining them as provided in the following section: Strategies and Tools.

The brief given to most textbook authors is that of knowledge transfer as defined by the requirements of a given curriculum within the confines of a particular subject. While the need for a fully integrated curriculum to accommodate ESD is clearly overdue, in the course of this work it was understood that, for the time being, embedded ESD in textbooks must respond to the requirements of current curricula as opposed to effecting radical curriculum change. The textbook author must fulfil the brief of effective subject specific knowledge while concurrently emphasising sustainability issues in a subject-specific context. This requires the formation of close and relevant links with current national curricula and a sharing of learning outcomes. Figure 1 uses the biology of genetically modified organisms (KS 4-5) to show how a thematic approach may be used to draw these two important elements together by *mining* curricula for opportunities to embed relevant SD issues within curriculum specifications. Sustainability issues are

identified as relevant themes and the interconnectedness of their causes and impacts is associated with relevant curriculum specified topics.

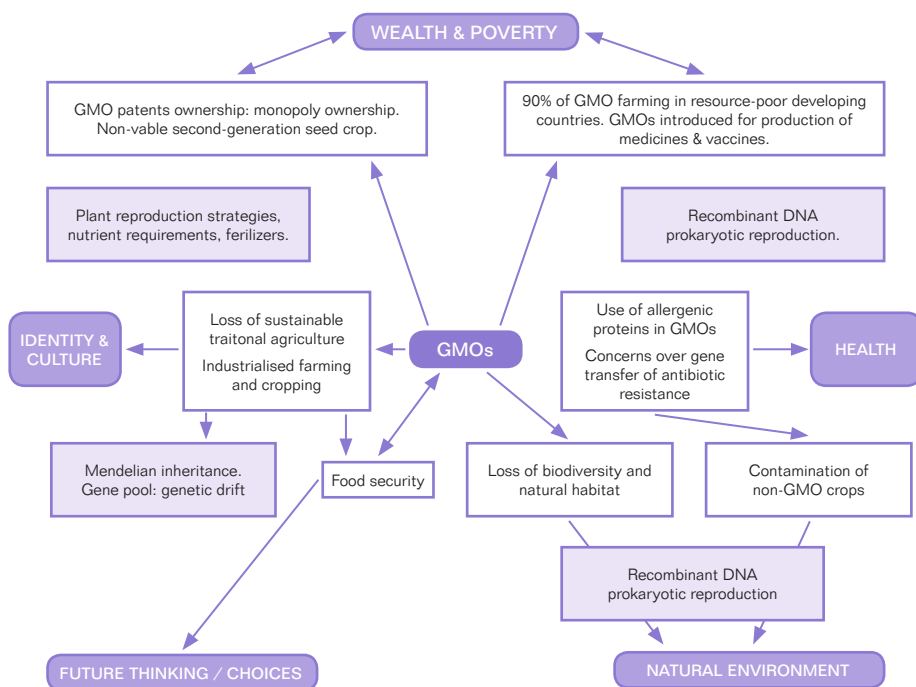


Figure 1: Links between topics underpinning the biology of genetically modified organisms (GMOs) and sustainability issues and curriculum opportunities. (Source: Johnston 2017: *Textbooks for Sustainable Development: a guide to embedding*. p. 74)

STRATEGIES AND TOOLS

Different subjects make different demands of authors. Nevertheless, a generic three step guide can be recommended to support textbook authors in embedding ESD:

1. Identify curriculum opportunities for embedding.
2. Align ESD & curriculum learning outcomes with each other.
3. Engage learners with sustainability issues, guiding and stimulating learner centred research informed by subject knowledge and relevant contexts.

Although the example in Figure 2 refers to science at key stage 3, the approach proposed can indeed be applied to any subject at all key stages. The three steps noted above may be applied universally with little modification. Further examples like this are included in the Guide and these address such issues as: nuclear energy (KS 3-5): pesticides and the decline of bee populations (KS 1-3): inclusive use of language (KS: all): geographies of sense of place & cultural identities (KS: all): the mathematics of social justice, gender studies and social inequities (KS 3-5). Other subjects are planned for later editions.

Step1: Mining the curriculum for opportunities to embed ESD within set topics

Since, as noted above, most textbook content is guided by the requirements of national curricula, the first task of textbook authors approaching embedding ESD is to identify curriculum opportunities for embedding SD issues. Figure 2 provides a method for doing this by mapping curriculum opportunities for ESD associations using much the same process as in Figure 1. At this stage a thematic approach may be taken by using sustainability issues as a matrix informed by the science topics being studied (or indeed *vice versa*).

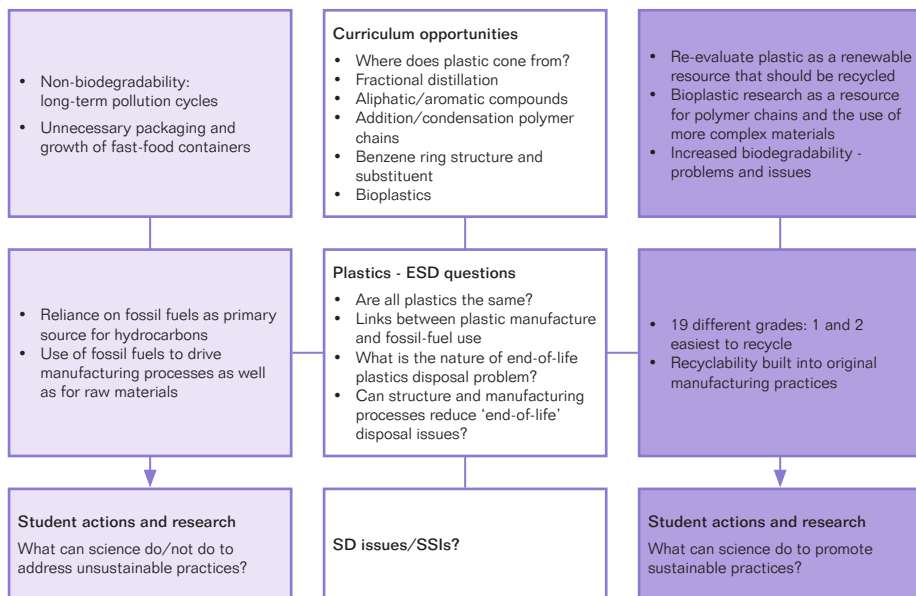


Figure 2: Framework identifying associations between curriculum ESD opportunities and associated issues. (Source: Johnston (2017), in: *Textbooks for Sustainable Development: a guide to embedding*. p.83).

The centre column shows the relationship between curriculum opportunities and ESD questions in the context of plastics in the environment, their manufacture and disposal. The left-hand column raises the negative aspects of plastics manufacture and usage whereas the right-hand column takes a positive approach in terms of actions that might be taken to ameliorate the problems identified. Although this is intended as an aid to authors, it is clearly, also possible for authors to use this technique to encourage learners to make their own associations with the subject material being studied and their own perceptions of sustainability issues.

Step 2: Aligning learning outcomes

Learning outcomes are closely associated with assessment and assessment is closely associated with the value placed on key aspects of the subject by both educators and learners. In order for ESD to work closely with curricula it is important to embed ESD learning outcomes alongside curriculum specified learning outcomes. However, it is also important that unnecessary pressure is not placed upon the learner or teacher by an

increase in the demands of the assessment procedure. Consequently, ESD learning outcomes must have a high level of integration with those already in place to assess subject specific knowledge. Thus, as the learner becomes more proficient in subject knowledge she/he can apply this knowledge to achieving ESD learning outcomes which in turn assist and enhance subject specific understanding. Table 2 below shows how this might be achieved. ESD learning outcomes are closely intertwined with the subject specific topics which learners have become familiar with. In this way appreciation of the issues identified in Step 1 is closely associated with and enriched by increasing subject knowledge and leads naturally to Step 3.

<p>Extract of learning outcomes for the WJEC GCSE in Chemistry (2016)</p> <p>2.5 CRUDE OIL, FUELS AND ORGANIC CHEMISTRY</p> <p>Learners should be able to apply and demonstrate their understanding of:</p> <p>Learning outcomes:</p> <ol style="list-style-type: none"> 1. The fractional distillation of crude oil. 2. Fractions as containing mixtures of hydrocarbons (alkanes) with similar boiling points. 3. The cracking of some fractions to produce smaller and more useful hydrocarbon molecules, including monomers (alkend), which can be used to make plastics. 4. Addition polymerisation of ethese and other monomers to produce (plastics) polythene, poly(propene), poly(vinylchloride) and poly(tetrafluoroethene). 5. The general properties of plastics and the use of polythene, poly(propene), poly(vinylchloride) and poly(tetrafluoroethese).
<p>Suggested ESD learning outcomes</p> <p>Learners should be able to:</p> <ol style="list-style-type: none"> 1. Critically evaluate the positive and negative aspects of the manufacture and use of plastics. 2. Use the knowledge of cracking in polymerization to compare renewable alternatives with oil as the resource for manufacturing plastics. 3. Use of knowledge of organic chemistry to recognise that what society currently designates as rubbish can be redefined as a resource and suggest actions to fulfil this.

Table 2: ESD learning outcomes aligned with curriculum specified learning outcomes.

Step 3: Promote learner centred research

Learner centred research and enquiry and project-based learning (PBL) are closely aligned with the thematic approach to teaching and learning and are vital components of this three-step process. Figure 3 proposes a sequence to this approach. In this the textbook author is encouraged to promote learner centred reflection and enquiry using developing subject knowledge to engage with sustainability issues and evaluate potential solutions to the perceived problems. Problem-based learning (Savery, 2015) can be a key strategy here and applicable to all subjects, issues and age groups. It provides the dual advantage of stimulating learners' interest in their subject and giving the opportunity to apply interdisciplinary competencies to evaluating and resolving sustainability issues through the vocabulary of the subject being studied.

Theme/context-based textbook

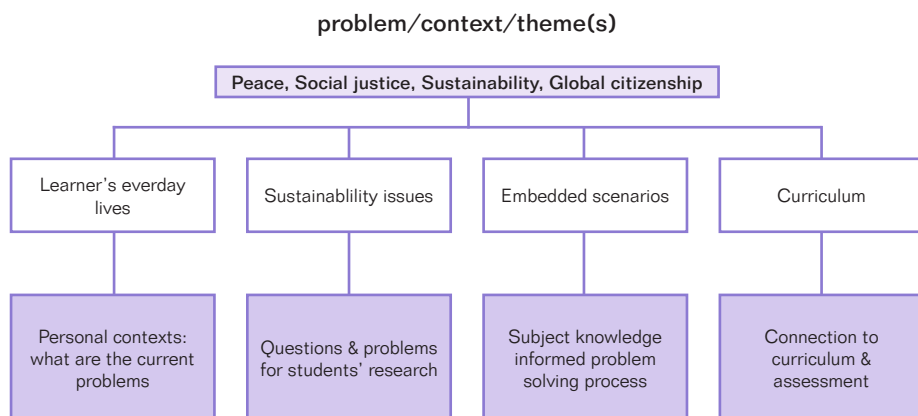


Figure 3: Integration of thematic and problem based learning approached to embedding ESD in textbooks. Source: adapted from: *Textbooks for Sustainable Development (2017): p. 77*

CONCLUSION

The style of writing adopted and the context visualised by a textbook author greatly influences how the learner (reader) relates to the material being presented and reflects how authors perceive learning to happen. Typically, subject-specific textbooks tend to be utilitarian and pragmatic in their approach to presenting knowledge, in the sense that their principal brief is to instruct and transfer knowledge within the confines of a relatively narrow, subject-specific focus. Information tends to be presented in a didactic manner in order to fulfil curriculum specifications, learning outcomes and assessment requirements. The effect of this is to limit the learner's capacity for self-direction and enquiry, and tends towards a behaviourist approach to learning (Pritchard, 2008). This contrasts with a constructivist approach (Taber, 2011, Richardson, 2003), where learners are encouraged to actively 'construct' their knowledge by making connections with their own experience(s). Constructivist perspectives on the nature of learning are founded on how learners contextualise their learning through the lens of their own experiences. Consequently, this approach has much to offer the pedagogy and practice of embedding ESD into textbook content. However, authors adopting constructivist approaches while fulfilling curriculum specified requirements, in a move away from solely content driven learning, also need to incorporate interdisciplinary perspectives (themes) that regard the student as an active rather than passive partner in the learning and teaching process. This is a considerable challenge for textbook authors who need to develop a versatile toolkit in order to fully engage with it.

In this respect, thematic (Ward, 2003) and problem based (Savery, 2015) learning are undoubtedly assets, where learners acquire knowledge by learning in a context and when they can connect their learning to real world experiences. In the publication *Textbooks for sustainable development - a guide to embedding* (which gives rise to this paper) and throughout the considerations discussed above, a constructivist approach has been a central guiding pedagogical principle. Teachers and facilitators may also find value in the

strategies proposed in the full publication, to inform their approach to lesson planning although the main intended audience of the guide is textbook authors and curriculum designers. Ultimately, the goals of the guide are to support and encourage authors to develop textbooks which are relevant to learners' experiences, and promote SDG 4.7 by forming a strong alliance between a developing subject knowledge and sustainability issues. For those wishing to pursue these thoughts further a free copy of the complete guide can be downloaded at:

<http://unesdoc.unesco.org/images/0025/002599/259932e.pdf>

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Local and global challenges in a Nordic context: working with teacher students in the Spica network

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INTRODUCTION

I learned new ways of thinking about teaching ... I have used new knowledge about the UN goals for sustainable development to approach curricula in a new way. All of this is knowledge I will bring with me into the teaching profession (Student 17, 2016).

This paper explores how an international network of teacher education institutions can contribute to strengthen future teachers in their work with sustainability and citizenship. In particular, we focus on how internationalisation in combination with local contexts can be a point of departure for building relevant global knowledge. With a Nordic perspective on teacher education, we present an example of how short-term mobility offers an arena for interdisciplinary work with sustainable development.

Spica is a Nordic network for teacher educators and teacher students, with participating institutions from Finland, Sweden, Denmark, Norway, Faroe Islands, Iceland and Greenland. The participating institutions are Greenland University, University of Iceland, University of the Faroe Islands, Malmö University, University of Oulu, University College Lillebælt and University College of Southeast Norway. The network was initiated as a response to the Bologna process where one of the main goals was to facilitate intra-European mobility (Teichler, 2012). Focusing on global challenges in local contexts, a key activity of the network is the organisation of an annual short course, alternating between the different institutions every year.

Through the voices of the 35 students participating in 2016 and 2017, we discuss the students' perspectives on their outcomes from taking part in this program. The discussion is based on data gathered in connection with courses organised in Iceland in 2016 and in the Faroe Islands in 2017. In the following, we outline the history of the network, discuss the structure and philosophy of the course, and explore the nature of the students learning outcome as articulated by the students themselves.

INTERNATIONALISATION AND THE SPICA NETWORK

Despite political ambitions to internationalise higher education, Nordic teacher students are among the least mobile of students (Isaksen, 2016; Nordic Education, 2012). The national nature of the teacher-training programmes have been seen as a main barrier to longer stays abroad. However, recent years have seen a broadening of the understanding of internationalisation to also include international reading material, international guest

lecturers, online collaboration and short courses abroad (Jones, Coelen, Beelen & de Wit, 2016; Villar-Onrubia & Rajpal, 2016; Beelen & Jones, 2015; Leask, 2015). In line with this, Spica strives to give teacher students the opportunity to benefit from internationalisation by combining internationalisation at home, virtual mobility and short-term mobility.

The Spica network is named after the Latin word for the head of a stalk of grain, symbolizing growth and harvest. It was established in 2006 and has been active ever since. Spica was built on the shoulders of two existing networks, ICE – a network for administrators concerned with increasing mobility - and ALKA – a network named after the Razorbill seabird 'álka' in Icelandic, focused on nature and science education, that had worked with the exchange of students and staff and development within teacher education since 1990 (Lundström, Pellikka & Gabrielsen, 2014; Spica, 2007). The new network was established with the goal of bringing social and natural sciences together in a mutual focus on issues of sustainability, citizenship and intercultural understanding. These topics had traditionally been treated separately in the two subject areas, and the idea of bringing overarching issues together across disciplines was part of the driving force behind the establishment of the network.

The core group of the network consists of two staff from each institution. The Nordic Council funds certain key activities and mobility for students and staff, while the respective institutions contribute human resources in the form of working hours. The network annually applies for funding from Nordplus Higher Education, the Nordic Council of Ministers' programme for supporting cooperation between higher education institutions in the Nordics, and received 79, 140 Euros in 2015/16 and 66, 070 Euros in 2016/17 for student and staff mobility and the intensive course.

Widening the concept of internationalisation to include online mobility and short courses has been useful in the development of the activities of the Spica network. One example is the yearly organisation of an intensive course for teacher students, who upon completion are awarded 5 credits in the European Credit Transfer and Accumulation System (ECTS). The course consists of a virtual part with the use of 'flipped classroom', readings and online seminars, an intensive course week in one of the network countries, and a final essay. The University College of Southeast Norway is coordinating the network and issues the credits. The same institution is also responsible for the online part of the course. The participating Spica-institutions take turns to host the intensive courses, and adapt the content to the local contexts and local research strengths. The students work in mixed groups, and prepare through flipped classroom teaching and online discussions prior to the intensive course. A core concern of the course is to depart from local contexts to explore global challenges related to the overarching issues of sustainability and citizenship. In 2016, an Icelandic context was used to explore conflicts of interest in connection to natural resources. In the Faroe Islands in 2017, the issue of sustainable societies was highlighted through the lens of youth cultures in-between tradition, modernity and sustainability.

METHODS

The data for this paper consists of reflection papers written by students participating in 2016 and 2017. The papers were part of the overall coursework, and a requirement in order to pass the course. In the assignment, the students were asked to reflect on their learning process and learning outcomes. The task was given after the students had returned to their home institutions, and was intended as a way of processing the learning experience,

as well as providing the network with material for evaluation and development. During submission, we asked students for permission to use their responses and feedback for research purposes. Students who accepted this request have been included in this study.

For 2016, the sample consists of 19 papers. For 2017, the sample consists of 22 papers. The total number of participants in the two years was 19 in 2016 and 28 in 2017. All students who handed in the final reflection paper after the intensive course are included in the sample. The length of the papers ranged from 3-5 pages. We were interested to find out what the students themselves highlighted when reflecting on their learning outcomes. To investigate this, an analysis was conducted with the two authors reading the material individually, and then working together to compare recurring themes and patterns. In the following, we discuss some of the main trends in the students' perceptions of their own learning outcomes.

DISCUSSION

'AN AUTHENTIC CLASSROOM' - GLOBAL THEMES, LOCAL CONTEXTS

A recurring experience expressed by the students is the transformative experience of learning through place-based approaches. This approach was seen as rewarding by many of the students, who commented on how the authenticity of the learning situation had a particular impact on them. In Iceland in 2016, the relationship between the limitations of natural resources and the energy needs of the local and global community was explored through meetings with various stakeholders and visits to places that would be affected by the construction of a new hydroelectric power plant.

[W]e were allowed to be students of this method [place-based learning] and really experience an authentic learning space. We were first given several lectures on hydro power plants, seen from different points of view. Then we were allowed to go out an experience first-hand how it would affect nature if these plants were to be built. It soon became clear that the image portrayed by the businessmen was not the same image and reality that the citizens in the area had (Student 19, 2016).

Through the place-based approach, the students were able to gain new perspectives on the local consequences of taming the river. One student argued that they 'saw the impacts of those projects in a very real and concrete way. I think it was a very powerful way to give information and also to teach us about the topics' (Student 15, 2016). Experiencing the contrast between standardised, power-point driven presentations, and the journey out into Icelandic nature influenced the understanding of the students. However, the students saw the two approaches as interdependent; 'If we had not had these lectures in combination with the excursion, I do not think I would have gained this insight' (Student 11, 2016).

Place-based learning is concerned with connecting classroom activities with real life experiences (Smith, 2002). The approach combines theoretical knowledge with experience-based learning. Combining these perspectives seems to have a powerful effect that should receive more attention in teacher education as it seems to have contributed substantially to the students' knowledge construction: 'The experiences with place-based learning made a strong impression. The difference between reading about a place and experiencing it leads to an obvious conclusion: the learning outcomes are far greater when learning about a place through visiting and exploring it.' (Student 3, 2017).

Perspectives from place-based education often depart from global issues, but ground these in a local context – the surroundings and community of the individual pupil. In this way, the method moves in dialogue between the local and the global, with less focus on the national. (Birkeland, 2014). In Spica, the place in question is not the immediate local community of the individual participant, but a specific place in the Nordics with a specific set of characteristics. The students take time to explore and get to know the particular place, but maintain a global dialogue: 'The current topics [hydropower versus nature conservation] that affect Iceland at the moment also affect countries globally. I believe we got very good insight to those topics at the course and at least I did also reflect upon my opinions and believes critically.' (Student 15, 2016).

Several students quite explicitly drew the connections between local and global in their reflection papers. For example, one student argued that 'sustainability is important to maintain Faroese lifestyle, therefore, the traditional Faroese culture complements the global pursuit of sustainability' (Student 9, 2017). Another student, after one day of excursion, got a 'good reminder that the Faroe Islands are not as isolated as it may seem, and have also changed drastically because of globalization, while still holding onto a distinct identity' (Student 5, 2017). However, even though the local perspective served to make global issues easier to grasp, students also caution of the dangers of 'blindness' when getting too involved in the local setting:

It has been well established that we have to decarbonise our energy system and this has to be done very fast. We cannot wait or hope for clever solutions, and as global citizens we have to take global action immediately to cap emissions. Thus to change the flow of Urriðafoss in the lower area of Þjórsá is possibly not an affair that should be left entirely to the faith of a group of dedicated activists (Student 7, 2016).

In sum, the students take away specific knowledge about a local situation, and many of them see the link to larger, global issues. Significantly, the use of place-based learning was not only connected to the topics at play in the courses but also gave more generalized insights:

[The Spica course] has helped me realise how subjects and topics are bound together and interlinked. How geography and geology are prerequisites for history and social studies, and how human needs and politics can dictate how we use the resources available and in turn influence nature (Student 1, 2017).

Finally, the students connect what they have been working with during the course and their future careers as teachers. Some focus on teaching strategies. 'The method I bring with me is place-based learning, which is about learning environments', is one student comment. Another student reflects on how the course 'gave me courage and showed me ways to use place-based learning in my teaching.'

GLOBAL THEMES, INTERCULTURAL LEARNING WITH NEIGHBOURS

A second factor that resonated strongly with the students is the intercultural experience of coming together across nationalities to work on global themes. When addressing this experience, the students pointed to aspects such as dialogue and tolerance, and understanding (though not necessarily agreeing with) different values and ways of life. The students' experience of having their values and perspectives confronted is

interesting in light of a common perception that mobility between the Nordic countries is not particularly challenging, as the Nordics share many common features with regards to politics, history, and language. A report from 2015 suggests that there is a lack of awareness about added value from studying in another Nordic country; 'Nordic mobility is in our interviews described as low threshold but at the same time a bit boring and not very exciting' (Elken, Hovedhaugen & Wiers-Jenseen, 2015, p. 14).

Contrary to this view of Nordic mobility, the responses of the participating students suggest that the Nordic context gave many opportunities to step out of the comfort zone. For instance, the content of the Spica courses of 2016 and 2017 provided several occasions for students to face controversial issues. The students themselves highlighted whaling, same sex marriage, and clean energy versus conservation of nature as topics that generated heated discussion and challenges. An interesting experience for the students is that they seemed to be surprised both by the extent of shared culture, history and experience between the Nordic countries, but at the same time struck by the differences: 'My main learning outcome from the Spica course is primarily how similar we are, but also how different. Most of the participants had similar value bases. What stood out was the different stages of progression in work and thoughts around questions of sustainable development, equal rights, equal worth etc.' (Student 8, 2017).

Experiencing both familiarity and difference at the same time opens up some interesting arenas for development for the students. It is also worth discussing the nature of the differences that the students say that they have experienced. There is a tendency towards simplifying and stereotyping, for instance many reacted against what they saw as 'old-fashioned' and 'rural' values in the Faroe Islands. These factors are often explained by students as caused by the geographical context, or the remoteness of the islands. Returning to the concept of place, these student comments raise the question of whether there is a danger that being too preoccupied by the particularities of place makes the place take on deterministic characteristics.

However, the main finding is that the experience of the courses contributes to a movement of perspectives and changes of views. One clear example in connection to controversial themes is the broadened understanding of Faroese traditions:

Before going there I could not understand it and I have to admit that I was a bit skeptical to even talk or see anything related with whale hunting, but it ended up that the knowledge I got in this experience made me change my mind and I would even defend Faroese culture now if I hear something bad about it. It is not that I support it now, but I understand it and I am not going to judge them anymore. I understood whale hunting is cultural for them and the fact that they do not do it for money is key part in this understanding. (Student 9, 2017)

This offers an interesting point of departure for building intercultural competencies, as perspectives often changed during the week – as the quote on whaling illustrates. Building the skill of recognising and understanding multiple perspectives without necessarily changing your own point of view is an important skill that is transferable to a larger global context. To achieve this, the practice of using local contexts for learning about global issues works well, particularly in groups where not everyone is 'local' – where there is a diversity of background. Although 'internationalisation at home' through reading international texts is a good start, meeting and discussing with others adds to the experience: 'I believe during the course we got to experience both sides of the

intercultural learning. We visited a different country, discussed with people from other countries and also reflected upon our own beliefs and the theories behind them.' (Student 15, 2016).

CONCLUSION

The Spica network has since 2006 built a model of cooperation in the field of teacher education in the Nordic countries. Through this paper, we have shared some experiences of our practice in the network, and offered a glimpse into the type of outcomes students that have participated take with them into the teaching profession. We believe that the experience of the network shows that working with large, overarching themes relevant to teacher education can be done across national contexts. In other words, short-term internationalisation supported by online internationalisation could work as an important supplement to achieve larger targets for the field. However, the model is not flawless – the network is vulnerable in that it is dependent on external funding, and dependent on a core group of dedicated teacher educators who prioritise the work. Working towards a stronger anchoring of projects such as Spica in the institutions as an integral part of teacher education would therefore be a way forward.

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Localising the SDGs in ITE at the University of Worcester

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INTRODUCTION, CONTEXT AND RATIONALE

The United Nations 'Transforming our world: the 2030 Agenda for Sustainable Development', or Sustainable Development Goals (SDGs) as they are commonly known, are a set of 17 broad goals to end extreme poverty, tackle inequality and end the threat of climate change. UNESCO recently recognised the role of higher education institutions (HEI) in student empowerment and championing sustainable development at a 'Higher Education Institutions – Key Driver of Sustainable Development' event (UNESCO, 2017). It positioned HEIs as crucial to SDG implementation. Bamber et al (2016) reviewed policy and practice relating to Education for Sustainable Development and Global Citizenship (ESDGC) within teacher education across the UK, to report that there is an uneven provision. This may be in connection to the varying teacher standards across the UK Nations.

In Wales, ESD is an integral part of teacher training, with a QTS teaching standard devoted to it. The Welsh Assembly Government, in the existing professional framework, (Welsh Assembly Government, 2009) states 'To gain QTS, trainees must demonstrate that they take appropriate opportunities to teach education for sustainable development and global citizenship in all relevant aspects of their teaching.' However, the new teaching and leadership standards, being used by NQTs from September 2017 and statutory for all Welsh educators from September 2018, include no explicit standards in relation to ESDGC (Welsh Government, 2017).

Learning for Sustainability is embedded in the teaching and leadership standards in Scotland, with a vision of supporting teachers in the promotion and practice of sustainability within their roles. 'Learning for sustainability has been embedded within the Standards for Leadership and Management to support leaders in actively embracing and promoting principles and practices of sustainability in all aspects of their work.' (GTCS, 2012, p. 2). There is a commitment to the social value of sustainability and recognition of the rights and responsibilities of current and future generations. It is documented as a professional expectation (GTCS, 2012, p. 6).

However, there are currently no teaching or leadership standards, statutory or otherwise, relating to sustainability for England or Northern Ireland. Consequently, ITE providers in these countries are under no monitored obligation to offer training in ESDGC to trainee teachers, therefore approaches and content vary widely. This research looks at the impact of an initiative trialled with Secondary ITEs at the University of Worcester in 2017.

THE UNIVERSITY OF WORCESTER: GREEN HERITAGE AND A NEW WORKSHOP

The University of Worcester (UoW) is one of the country's major providers of education, training and research for the children's workforce and has a clear vision for its role in promoting the principles of sustainability. A responsibility it takes very seriously and has, as a result, achieved some high recognition for its work. The UoW secured a top five ranking in the 2016 People and Planet University League for green universities. It was the first University in England to gain the EcoCampus Platinum award in 2010 and it continues to actively promote sustainable living to attending students, with a set of 'Golden Rules' for campus, and engages the wider community through its 'Go Green Week' and 'Skills for Tomorrow' programmes.

McCoshan and Martin recognised, in their HEA evaluation of the impact of the Green Academy (UoW was a first cohort participant), the adaptability of the UoW Sustainability curriculum in relation to interest from student surveys: 'In one survey 86% of those interviewed considered that an opportunity to study an option in sustainability would help their future employment and personal development.' (McCoshan & Martin, 2012). These findings provided the impetus to develop, with the Green Academy, a 30-credit elective in sustainability, which has been on offer since 2012.

'Environmental Sustainability and Social Responsibility' is one of the seven core University Values outlined in the Strategic Plan (University of Worcester, 2013) and in 2017 it supported, through a funded Learning and Teaching project, the development and delivery of an optional education workshop, delivered during a PGCE course 'Directed Time' session, for secondary trainee teachers, across the broad spectrum of subjects.

The two hour session, held in early April, was entitled The SDGs: From Pessimism to Hope. It included a general introduction to the SDGs, which the vast majority of the assembled participants (from the curriculum areas of Geography, Science, DT, RE and MFL) were unfamiliar with, as well as an opportunity to critically engage with the broader concept of the Global Goals, to consider the responsibilities of educators and to explore a variety of resources that they might use to bring the SDGs into their particular curriculum areas.

The resources originated from the EU funded TIDE~global learning project: 'Young People on the Global Stage: their education and influence', focusing on Sustainable Development, Poverty & Wealth, Food & Hunger. All of the resources are freely available and support educators, at all stages, with a tool to teach global development. They introduce the notion of a set of 'global lenses' or 'opticas', from magnifying glasses (to open the issues) to telescopes (to develop utopian 'big ideas' thinking). The workshop was well received with students identifying the relevance of the goals to many areas of school life and their subject areas. They identified ways to include education for the goals within their own lessons.

AIMS AND METHODOLOGY

This research aimed to follow-up with PGCE students who voluntarily attended an SDGs workshop, who also self-selected to participate in an electronic interview, about their prior knowledge and future plans in relation to ESD through the UN SDGs.

This research sought to explore:

1. The levels of knowledge of the SDGs prior to undertaking the workshop.
2. The relevance participants in the workshop felt the SDGs have within their curriculum areas and wider professional role.
3. Participants' ideas/experiences on how best to embed the SDGs in secondary education settings within their curriculum areas.

As workshop attendees had completed their PGCE course at the time of this research, interviewer-administered questionnaires, the preferred method identified as 'Standardised' by Saunders et al (2016) were no longer viable. Therefore, non-standardised, one-to-one, internet mediated interviews were conducted with participants who expressed an interest at the end of the course. 45 students from a range of subjects (DT, Science, RE, Geography and MFL) attended the optional workshop. Seven expressed an interest in participating in this study, sharing their knowledge and school experience of the SDGs, and five trainees (from the MFL, Science and Geography courses) finally completed an electronic interview.

FINDINGS

For the purposes of anonymity, as per the ethical approval granted for this research, the trainees were assigned alphabetical identities A to E.

Prior knowledge: Had you heard of the UN SDGs before you started your PGCE course?

The first question explored what knowledge the participants had of the UN SDGs prior to embarking on their ITT course. Across the board, with postgraduate respondents from three curriculum areas, there was no prior knowledge of the SDGs. Interviewee C had recently studied the Millennium Development Goals as part of their undergraduate course, at a different institution.

Reactions and relevance: What did you think of them when you first learned about them? How relevant do you think the SDGs are to educators?

The next two questions focused on trainee reactions to the global goals and their perceived relevance to educators. Four of the five reflections on the goals were entirely positive, from their being identified by interviewee E as 'good building blocks' for change, to interviewee B sharing excitement on working with young people towards the SDGs. However, one trainee (interviewee C) described them as 'somewhat arbitrary in their description, such as the insistence on categorising extreme poverty at \$1.25'. All participants responded strongly (using phrases that included 'most important', 'extremely' or 'very') that they felt the goals are relevant to educators.

The role of educators: What do you feel is the role of educators in the delivery of the SDGs?

Trainees shared their perception of the role of educators in delivering the SDGs. One

interviewee (A) suggested that educators have an opportunity to deliver the goals explicitly through signposted sessions in PSHE/form time, as well as through curriculum subjects such as Geography, RE, Science and English. Interviewee C suggested that the responsibility falls too often on the shoulders of geography educators: 'it needs to be the effort of the whole school as an institution of educators to work together to develop a scheme and create a culture where all subjects help contribute...'

Interviewee E suggested that it requires strong will from the school leadership, as classroom practitioners lack the time and perhaps the will to embed ESD. Interviewee D suggested that both pupils and teaching colleagues needed education on the SDGs in terms of their purpose and to challenge their misconceptions with facts.

Interviewee B described teaching the SDGs as a responsibility, enabling their pupils to make informed decisions. They suggested that all educators should be teaching the SDGs as part of an institution wide scheme.

The SDGs in school experience: What work on the SDGs did you see on your school experience?

Interviewees shared their experiences, from each of their two school placements, of work on the SDGs. There was little to no SDGs education in evidence on either placement. One school was seen to be working towards reducing printing and reuse of materials, but this was primarily due to budget issues, rather than conservancy.

Another school had included the SDGs within their printed academic planner for each student in 2016/17, however, this was removed for 2017/18 as a pupil focus group did not know what they were, highlighting that they are not being referred to by their teachers. Interviewee A witnessed work related to the outdated MDGs. These observations by no means confirm that ESD is not present in the ten different educational settings experienced by these trainees, but does show that these students did not come across any in their limited pastoral and curriculum experiences.

Localising the SDGs: How can schools localise the SDGs? What ideas do you have for embedding the SDGs in schools?

Interviewees shared their ideas for localising and embedding the SDGs within their schools.

Ideas included:

- Developing small, student-led, projects.
- Allowing stakeholders to have a say.
- Providing additional funding and/or someone in charge to lead a program.
- Joining the Eco-Schools programme.
- Linking with local projects/transport initiatives.
- Working with families/wider community/local authority.
- Encouraging recycling.

Interviewee A plans on setting up a 'growing' project and would like to work with the local authority on the whole-school travel plan. Interviewee B will be inducting their new year 7 students into the SDGs early and revisiting them throughout their teaching of other topics, as well as starting a club where pupils develop their own SDG related

projects. They also suggest that pupils should be tasked with identifying how the school can work towards the SDGs and then lead/develop projects accordingly. Respondent C, with some opportunities in their new post to work with international students, hopes to be able to integrate the SDGs into their teaching using the personal experiences of his varied students. Interviewee E suggests using the tools available from SDGs website and coordinating actions.

Responsibility: Whose responsibility within the education system are the SDGs?

Responses on whose responsibility the SDGs are within the education system were varied, ranging from 'everyone' to, 'those in power' and 'the DfE'. Interviewee C suggested that all educators, in every phase, have a responsibility and went on to suggest that it would be a help for introductions to the SDGs to come through higher education in all fields of study. Interviewee B identified the responsibility as resting ultimately, with suggested DfE insistence, with head teachers but suggested that it could be delegated to a designated member of staff.

SDGs and secondary education: Is there anything else you would like to add about the SDGs and your role as an educator?

There was an assortment of responses to the final question on the SDGs and trainee roles as educators. One respondent shared their feelings of readiness, further to University input and student collaboration, to deliver SDG education (interviewee A). Another mentioned their desire for the SDGs to be incorporated in the National Curriculum (interviewee C) alongside a wish to have greater interaction with the SDGs during their PGCE course across all curriculum areas, thus enabling teachers of all subjects to appreciate the responsibility beyond humanities teaching.

CONCLUSION

A short conclusion is now provided for each of the aims of this small-scale research project:

THE LEVELS OF KNOWLEDGE OF THE SDGS PRIOR TO UNDERTAKING THE WORKSHOP

The interview responses make it clear that, before the inclusion of The SDGs: From Pessimism to Hope workshop, these ITEs were unaware of the Global Goals. Furthermore, whilst some of them had come across the MDGs in prior learning or experienced some teaching of the MDGs in their school placements, there was very little knowledge, understanding or embedding of the SDGs within their placement school experiences.

THE RELEVANCE PARTICIPANTS IN THE WORKSHOP FELT THE SDGS HAVE WITHIN THEIR CURRICULUM AREAS AND WIDER PROFESSIONAL ROLE

All of the trainees recognised the relevance of the Global Goals to educators, with most feeling personally responsible and in recognising that all teachers' have a responsibility for the delivery of the SDGs. Some of the trainees revealed that they felt the workshop, alongside conversations that the workshop prompted, have prepared them for embedding the global goals into their teaching practice or that they are keen to work with young people on the goals. Respondents additionally suggested that there is a need for strong leadership to drive forward ESD in schools, from its inclusion within statutory DfE frameworks, to empowered senior leaders with sustainability responsibilities. One

respondent perceived an inequitable burden on humanities subjects to address the SDGs, whilst all interviewees (from MFL, Science and Geography) recognised the responsibility of educators.

PARTICIPANT IDEAS/EXPERIENCES ON HOW BEST TO EMBED THE SDGS IN SECONDARY EDUCATION SETTINGS WITHIN THEIR CURRICULUM AREAS

The interviews revealed that, whilst the trainees had seen little in the application of/action on the SDGs in their school experience placements, they could see routes to building the goals into their own curriculum areas and wider school frameworks. Suggestions included; the use of PSHE/form time, student voice to identify projects, student leadership of projects, working with the wider school communities and stakeholders, as well as a proposal of using the Eco-Schools framework to embed the SDGs in schools.

This was a small-scale piece of research, conducted in a short time frame. It would be interesting to re-examine the attitudes of the contributing trainees, their experiences and actions concerning the SDGs for the first years of their teaching practice. The University of Worcester hosts an online sustainability magazine with an external publishing platform, alongside an internal learning platform (private to students and academics), allowing academic, social and environmental links to be made. This space could be used to study the long-term aftereffects of the workshop through an invitation to participants to share good practice/experiences corresponding to the SDGs from their schools. This forum has the potential to enable collaboration amongst academic and practitioners, both within the Institute of Education and beyond, to extend their knowledge of a range of sustainability work.

The success of the workshop, based on positive attendee feedback from trainees in different curriculum areas and through this research, support a case for integrating an introduction to the SDGs into the wider professional studies element of the ITE programme at the University of Worcester.

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Little stories and big pictures: quality education addresses social and economic inequality for the visually impaired locally and globally

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INTRODUCTION

The role of teacher education has a long history of supporting some, if not all, of the 17 global goals set forth by the United Nations for 2030. Although particular populations are not named in the SDGs, attending to disability groups is requisite in a just world. People who are visually impaired (VI) are 'one of the greatest untapped labor resources' (Lynch, 2013, p. 408) and some schools may (albeit unintentionally) miss opportunities to impact local communities, change business practices and societal norms that exclude those who are visually impaired. Unemployment across VI communities and barriers to socialising activities leading to isolation are found in statistics across the developed world (Lynch, 2013; Vision Australia, 2007), and are significantly worse in the poorest and developing countries. It is against this backdrop St. Vincent's School established the 'village' concept where individual pupils could develop their own 'flight paths' by connecting formal National Curriculum lessons with an enriched curriculum attached to their interests and aspirations. In this paper, we reflect on the critical role of building-in the engagement of community with education and the sharing of best practices with new generations of educators. St. Vincent's School created an 'education and enterprise' village that draws learning communities together with a common goal: to widen employment and friendship opportunities *with* VI pupils. It is this *quality education* (SDG 4) we seek to share with VI (and other disability) communities to reduce unemployment and access to education inequalities (SDG 10) and thus achieve SDG 8 *decent work and economic growth* for and from such (connected) learning communities.

THE EDUCATION AND ENTERPRISE VILLAGE

The concept of an education and enterprise village is based on social science theories which posit that social capital is generated from interwoven networks of social activity that have been shown to decrease poverty, spread empowerment, and deepen inclusion whilst enhancing autonomy and participation (see Bourdieu, 1986; Coleman, 1988). Essentially, social capital is about how people interact with each other (Dekker & Uslaner, 2001)

and is best understood within the context of the 'village' through Bourdieu's concept of 'habitus' and 'field' (1977, 1993). A key component to the village concept, as it applies to our case studies, is a space where VI pupils can explore their creative ideas within their own context on a level field alongside peer 'linked' reverse inclusion and service learning learners. A key to success is finding 'what works' (Kerr, 2009, p. 12) within project based learning for the linked individuals, where the common goal is enhancing VI skills towards employment and the increasing of friendship groups. The 'village' concept where we are all teachers and learners (Gramsci, 1971) generates learning spaces where creativity can flourish.

At St. Vincent's the education and enterprise village is an integrated system of multiple approaches, specifically Information and Communication Technologies (ICT), reverse inclusion, and service learning. We live in an ever increasingly connected world that challenges ways we communicate, practice inclusion, and engage in service, which impact our mental health and wellbeing as well as our engagement in physical activity and academic endeavours. In our digital world, education in the United Kingdom over the last twenty years has sought to keep pace by connecting our children through ICT. In our social world policy makers, educators, parents, and pupils have varying perspectives and experiences of inclusion and integration, particularly along the lines of ability. The concept of reverse inclusion/reverse integration (RI) has students without special needs in scheduled activities work alongside children with special needs, but within the safety net of familiar surroundings for the disabled pupils (Schoger, 2006). Research in Israel shows that participants with disabilities who participated in a reverse-integrated wheelchair basketball program showed increases in perceived ability, quality of life, and social competence (Hutzler, Chacham-Guber, & Reiter, 2013). In the UK, RI within sports is demonstrating impact; 'it has given me social skills, self-confidence, self-esteem, opportunities for travel and the vehicle to show my ability rather than my disability' (Vickerman, Hayes, & Whetherly, 2003, p. 49). Service learning (SL) is a particular form of volunteering seen by McKnight-Casey et al., (2006) as a means of empowering students and institutions to become aware of the needs of their communities and become civically active with them.

What marks the education and enterprise village as unique at St. Vincent's is how the engagement with social capital has strengthened outcomes. This was noted in St. Vincent's Ofsted Inspection of November 2016:

Pupils' learning is enriched with a wide range of opportunities for them to engage with the local community, including with business and enterprise. This helps to deliver your aim for pupils to achieve success in adulthood once their journey at St Vincent's comes to an end. There are many examples of past pupils following their chosen careers as a result of your work in this area.

The curriculum at St Vincent's is a key strength. Pupils learn a wide variety of subjects but their learning is developed exceptionally well through enrichment activities. Such activities provide pupils with opportunities to make new friendships, to follow their dreams and to be confident of a successful future.

What defines SL at St. Vincent's as unique and detailed further within the context of community partnerships, 'values' and ICT and curriculum generation, is the engagement of pre-service teachers and student design engineers in reciprocal value learning experiences focussed through the seeking of routes to employment and friendship groups

for the VI. As an established and ongoing process, St. Vincent's enlists student (SL) volunteers from their subject specialisms and interests (as a social cause Torney-Purta et al., 2001) matching those strengths and interests to VI pupils' strengths and interests, and RI pupils' interests, within project-based learning activities. The ultimate, longitudinal outcome has seen pupils generate their own 'flight-paths' or direction linked to their employment aspirations. The reciprocal value outcomes have been evidenced against volunteers' acquisition of the teaching 'Standards' required to qualify as a teacher and in outcomes for St. Vincent pupils.

PROJECT-BASED CASE STUDIES IN THE VILLAGE

In this section we report on three projects which have brought together RI, SL and wider 'soft' to 'hard' value added outcomes for pupils in the village; the Million I 'Sight box' project and the school 'Fab 4000' comic. Over the last three years, pupils at St. Vincent's have been encouraged to think of entrepreneurial ideas attached to how they would design support for their own disabilities. Although cross curricular in its approach, Physical Education lessons (including friendship group generation, health and participation reasons) have served as the starting point to delivering a deeper engagement in teaching and learning for the pupils. Two specific ideas have been researched and generated with the children 1. A running line enabling VI pupils to run without need for a sighted guide and 2. A 'Boccia Grid' enabling pupils to enhance their spacial awareness in playing what is in essence, bowls. Working with Rotary International District 1180 (where St. Vincent's has its own Rotary Club of Liverpool St. Vincent's) funds were raised to generate a physical 'sight box' containing these two sports access ideas and also including a range of other existing resources available for VI sports access. To date, one box has been gifted to the Pakistan Multicultural Centre in Toxteth, Liverpool to be sent to a VI school in Pakistan, one will be taken to a VI school in Nepal in collaboration with the Pahar Trust (www.pahar-trust.org) in February 2017 and a further one to Sierra Leone also in February 2017 with boxes at the time of writing ready for Rwanda, Gambia, India and Indonesia. The aim is to provide a means whereby VI pupils in the UK can design ideas for inclusion in the sight box enhancing employability, whilst recipients of the equipment overseas in developing countries can use the equipment to become trainers and secure work. There is a synergy here with the 'bigger picture' of the PREVENT aims in connecting VI communities with positive outcomes celebrating supportive settings for all individuals as opposed to focusing on differences (e.g. cultural or religious). To fund the research and development needed for the sight box as pupils come forward with new ideas St. Vincent's generated the 'Million I' project calling for one million people to say 'I will support this innovation with £1'. A secondary outcome has been the support of a startup SME from a design engineering (SL) student who volunteered into St. Vincent's from Liverpool John Moores University. This student is now developing a VI Rugby ball with the school connecting cross curricula STEM teaching and learning (www.sightbox.org.uk) The Million I, U – tube link and its connection with the school being awarded 'Freedom of the City' can be viewed at: https://www.youtube.com/watch?v=Q_nBdwCTwHU

For example, studying game making within his ICT curricula one past pupil (Ben) was given the opportunity to spend a week at the Sony gaming Test bed in Liverpool, followed by a submersion in gaming innovation at the well acclaimed G2G3 centre in Edinburgh. Although visually impaired, this is not his defining characteristic; it is his creative imagination. Supportive ICT specialists were able to translate Ben's ideas very rapidly to 'on screen' demonstrations highlighting his creative abilities. Returning to the village, Ben

shared ideas with a number of Service-Learning focussed students from Liverpool Hope University who had high ICT literacy skills. Sharing of ideas and 'having a go' at those ideas, subsequently led to this pupil securing financial Small Medium Sized Enterprise (SME) support and setting up his own business now employing two people in taking gaming technology to a schools market across the North West of England. Furthermore, the creative impact coupled with careful, focussed and cross curricular classroom support by teachers, learning assistants and Service-Learning volunteers assisted him in securing a DISTINCTION * in his Pearson BTEC Level 3 Certificate in Information Technology examination. His overall success boils down to this pupil valuing and being supported to value his own creativity, an extension of current definitions of RI, SL and engagement in social capital.

Reflecting on the sight box and its international links, the school decided to develop a comic strip to connect literacy and numeracy lessons with the wider vision of the school. In September 2016, St. Vincent's brought together an event specifically to provide the individual (ICT and literacy) strength engagement of pupils within curricular workshops linked by innovation, creativity, the generation of a comic and service to visually impaired (VI) communities across the world.

The global 'coding dojo' movement with Salesforce visited St. Vincent's introducing VI children to computer coding workshops and gaming technologies: <https://vimeo.com/186291220/7664f0f8f5>

The coding dojo was all linked to a raft of exciting ideas designed to fire the imagination and showcase opportunities for VI pupils within the world of work (see Twitter @stvincentsL12). Furthermore, the project engaged the school Scout troop and Duke of Edinburgh students in developing alternative 'outcomes' attached to Scouting and DofE awards. As part of the workshops, coding programmes were used to introduce a 'drone'. Ideas were sought from the children as to how a drone could, for instance, fly medical supplies into remote areas. At the end of the day, colleagues from Liverpool John Moores University flew a real drone across the school, reinforcing a message that imagination and creative ideas can lead to real actions. The 'coding' workshops worked in synergy with the writing of a comic alongside former Marvel comic writer Tim Quinn. The comic itself has St. Vincent pupils as the 'Fab 4000' superheroes using their coding skills to operate a drone as a means to eradicate the 'blackfly'; a major cause of sight loss across the developing world. Our past pupil Ben noted at the start of the paper and his (quite real) 'ZAPZ' bus is included within the story. The comic can be viewed at <http://www.stvin.com/archives/11109>

The third project upon which we report is 'Shenanigans', the 'home of storytelling' for the visually impaired. Devised by staff member and author (pseudonym) Harrison F Carter, Shenanigans is an enrichment project (a school club) to guide keen writers through the creative stages of story development through to publication. (Follow on Twitter and website @stVinCreative and www.shenanigans-creative.com) It is by nature highly collaborative, and seeks to make use of the potential of St Vincent's as the '*enterprise village*', utilising facilities such as the radio station, the recording studio and reprographics. Shenanigans provide a forum for socialising and community engagement, cumulatively contributing to our social, moral, spiritual and cultural objectives. The scope of the Shenanigans club was extended to encompass a link with the Duke of Edinburgh's Award. Through the 'Skills' element of the D of E programme (designed to develop practical and social skills that

nurture personal interests and talents), it was realised that the members of Shenanigans can fulfil this criteria through their participation in the club. The outcomes, i.e. their stories and positive contributions serve as evidence of their confidence and self-esteem being raised. As a relatively new project, we look forwards to seeing how VI young people reflect and make-sense of the United Nations 'Sustainable Development Goals' moving forwards within their writing.

CONCLUSION

How we educate *our* children on a global scale, and the values we share with them holds a key to unlocking potential, and in terms of the economy, more equal and inclusive ways for disability groups. The full engagement of disability groups and their creativity within future thinking and ICT development, offers scope to nurture life changing ideas and initiatives for individuals and their peers on a more level footing. Advances in ICT and access technologies for disability groups, coupled with the increasing power of ICT to connect humankind, would appear to present a myriad of opportunities to generate SDG 17 'partnerships for the goals,' partnerships that could then seek to impact on the other sixteen SDGs.

We would encourage Governments to rethink how special school settings can offer innovative ideas and share best practice with mainstream partners. Specifically, we feel it well advised to place an immediate focus on SDG 17 '*partnerships for the goals*' within the context of sharing best practices from project-based learning. There are a number of community partners such as Rotary and Scouting where added value can be nationally connected. Furthermore, we suggest student teachers, student engineers and student doctors and nurses would be well placed in collaborative SL projects alongside their teaching peers. We encourage Governments to look at (local) SL models embracing RI and social capital as a means to link Higher Education and school learning communities with special educational needs best practice. We encourage Governments to invest in research and development across ICT and STEM for and with disability groups as part of local SL models. Where teacher training is undertaken, we encourage Universities to engage acquisition of the 'Standards' required to qualify so as to embrace SL and other qualifications such as the Duke of Edinburgh award as a space to learn and appreciate difference and ability. Furthermore, we encourage Ofsted to consider more deeply the acquisition of such non-academic qualifications alongside their wider 'soft to hard' outcomes potential. Furthermore, we encourage the research community to investigate the links between Social Capital, Reverse Inclusion, Service-Learning and creative curricula in providing better outcomes in terms of employability and friendship groups for VI communities of learning within a 'common good' framework.

Our challenge is to ensure that teaching reflects the evolving knowledge and ideas of contemporary practice, and the ever-changing expectations of society, while standing firm and resisting change to the core values of professional practice. The United Nations 'Sustainable Development Goals' provide that reflective platform upon which we may stand together, and act into.

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Research Summaries

Research in Action

Special Issue 2018

Research Summaries

'Research in Action' aims to encourage the sharing of ideas and innovations in teacher education by making connections between research and practice. The journal aims to showcase research undertaken at Liverpool Hope University, within our partnership schools and across networks such as TEESNet, and within our partnership schools. This section provides brief summaries of recent/ongoing research projects undertaken by Liverpool Hope staff, colleagues from our partnership schools and PhD/EdD students to encourage professional learning and dialogue.

Exploring the 'Schools of Sanctuary' Movement: How the grassroots initiative responds to resettlement and hospitality of new arrivals in Liverpool

Dr Carly Bagelman, Lecturer in Education Studies, Liverpool Hope University

Currently, an unprecedented 65.3 million people have been displaced from their homes, and children make up 51 per cent of these displaced peoples (UNHCR, 2016). As a result of these migrations, many new arrival children are undergoing a complex process of resettlement. While many scholars agree that "[s]chooling in the era of globalization, arguably more than ever before, profoundly shapes the current culture and well-being of children, as well as their changes and opportunities", 'resettlement' is primarily handled by the immigration sector (M. Suarez-Orozco, 2001, p. 345). Schools often simply integrate students into existing structures and curriculum in which they must 'catch up', which both views them from a deficit perspective and acts as an erasure of cultural identities and migrant experience (Li, 2006). According to a wealth of research, refugees, migrants and asylum seekers often experience deep feelings of alienation in their schooling (Arizpe et al, 2014; Blair et al, 2008; Suarez-Orozco and Suarez-Orozco, 2001; Rutter, 2003).

This research project will consider how the Schools of Sanctuary (SOS) movement (a branch of the Cities of Sanctuary Movement) responds to these issues. SOS, an initiative in which schools acquire Sanctuary status by meeting 3 key principles relating to the implementation of curriculum focused on positive resettlement and hospitality, and programmes linked to these areas, has gained momentum in Liverpool with over 40 participating schools. This work will consider how SOS address their two-pronged goal: to not only attend to the resettlement needs of newly arrived students, but also to teach domestic students about migrant experience, and how to generate a culture of welcome in and outside of classrooms. This movement operates on an ad hoc basis within each school in which teachers develop mission statements, lesson plans, and special events to meet the 3 principles. While working with experts in Liverpool's Ethnic Minority and Traveller Achievement Service (which oversees and grants SOS designations), and participating schools, this project seeks to examine the following:

- The SOS movement (its origins, its key aims, its relation to the City of Sanctuary movement at large) with a focus on participating Liverpool school motivations and involvement
- The nature of the pedagogical approaches and curriculum currently being developed and implemented by schools in order to attain and continue to uphold the School of Sanctuary status
- The impact that this movement is having on a) the positive resettlement of new arrivals b) the spirit of hospitality exhibited by 'home' students c) teacher socio-cultural acumen in speaking to key migration issues and creating cultures of welcome in schools.

- The ways in which this pedagogy and curriculum can be enhanced to positively impact resettlement, hospitality, and teachers' migration acumen.

For further information please contact Dr Carly Bagelman, Lecturer in Education Studies, Liverpool Hope University at bagelmc@hope.ac.uk.

Conference on Implementation and Challenges of Multicultural Education, Mahidol University, Bangkok, Thailand, June 2018

Dr Henry Kum, Lecturer in Education Studies, Liverpool Hope University

This conference was funded by a Researcher Links workshop grant offered by the Newton Fund, the British Council and Thailand Research Fund. The conference included keynote presentations and research papers on different spaces through which multicultural education negotiates its implementation in schools, both in the UK and Thailand. Although the origin, the impetus and challenges faced by Thailand and UK in implementing multicultural education are different, the sharing of knowledge by scholars from both countries sought to contribute to the advancement and improvement of providing education for students from diverse cultures.

At the conference Dr Henry Kum from Liverpool Hope University presented his research entitled 'How do refugees become "expert learners"? Conceptualising experiences of exile as learning, resilience and culture'. Dr Kum's paper explored the settlement of refugees in the context of a mediated policy in which they are often portrayed as both an under-utilized resource and as a demanding challenge with respect to education, health services and labour. He problematized the notion that contemporary refugee research contends that educationalists in host communities are not always fully aware of the potential emotional, social, cultural and educational difficulties faced by refugees on resettlement. In opposition to these hegemonic discourses the paper posited a response in terms of how and to what extent refugees might be regarded as already "being", and also being able to "become", expert learners. The paper concluded that it is necessary to move beyond theories of motivation and learning, where negative personality traits and the myth of fixed abilities occupy a position of hegemony, to theories that draw upon socio-constructivist and existential experiences of identity, culture and learning in exile (Koyama, 2013). The 5 day workshop concluded with school visits and opportunities to foster the international research collaboration and networks among participants. A journal series, edited book and funding application for further collaboration with Thai researchers was agreed on.

For further information please contact Dr Henry Kum, Lecturer in Education Studies, Liverpool Hope University at kumh@hope.ac.uk



Book Reviews

Research in Action

Special Issue 2018

Book Reviews

Lynn Revell and Hazel Bryan, *Fundamental British Values in Education: Radicalisation, National Identity and Britishness*, paperback, 135 pages. Published January 2018 by Emerald.

The FBV phenomenon – the recent drive towards the teaching of ‘fundamental British values’ in schools – needs this book. Part One, on FBV’s historical and cultural background, is a definitive account of how FBV shifts the discourse on Britishness from cultural figures such as Shakespeare to political ideology.

However, when we reach Part Two, the policy and practice of FBV is discussed by way of two themes that are not in the book’s subtitle. One is professionalism. The other is the sociologist Zygmunt Bauman’s concept of liquid modernity: the metaphorical idea that, in the ever-changing times in which we live, the state acts in new ways due to the dissolution of formerly solid certainties.

When I read this book I did not know what to expect, and I got two surprises. One was the quality of the historical analysis from two non-historians. The other was this use of FBV as a segue into a secondary topic: the new era of professionalism where all ‘professional’ judgements are unstable and teachers are no longer seen as the best judges of what values to teach. Therefore while the book is excellent it also, thankfully, opens up as many questions as it answers.

Dr Joseph Maslen, Lecturer in Education Studies, Liverpool Hope University

Daniel Wagner, *Learning as Development: Rethinking International Education in a Changing World*, paperback, 324 pages. Published March 2018 by Routledge.

This ambitious book seeks to conceptualise ‘learning as development’ as a foundational approach to international development. It does so by synthesising interdisciplinary perspectives on learning with research evidence from multiple social sciences. Its publication is timely: despite the inclusion of education in the Millennium Development Goals and pivotal role of education across the 2030 United Nations Sustainable Development Goals (SDGs), education for international development continues to be resourced less than health and infrastructure (UNESCO, 2015). Indeed, recent estimates indicate a \$1.8 trillion funding shortfall across middle and low-income countries to meet the requirements of SDG4 on inclusive and equitable quality education by 2030 (DfID, 2017).

Although this book recognises the role of informal education, Part 3 focuses specifically on the role of schools and teachers in supporting learning. Interestingly, it concludes with an agenda for learning equity proclaiming ‘learning promotes sustainable development’ (p. 260) without having engaged explicitly with the critique that further schooling may in fact hinder the development of sustainable societies. Those unsettled by Wagner’s advocacy for measurability and accountability in formal education internationally will be reassured that he remains well attuned to the challenges of embedding learning measurement tools

sensitive to localised conditions, language and attitudes. This is evident in his call for 'Smaller, Quicker, Cheaper Assessments' and 'Citizen-Led Assessments' within social science research. Wagner also emphasises that global learning metrics present a barrier to addressing inequalities between and within nations. Indeed, international surveys are often completed by a subset of the international community, silencing the contribution of many countries within debates around policy and practice.

The final part of the book focuses on contemporary trends and challenges in learning and development. Chapter 10 on 'Globalisation and the Environment' is, disappointingly, the shortest in this section. Rejecting an economic growth agenda for international development, it simply concludes that 'a global citizenry that is continuously learning is essential' (p. 213). This fails to adequately address 'The Environmental Imperative' referred to by Wagner, or recognise the importance of Education for Sustainable Development and Global Citizenship that arguably constitutes 'the very heart of the sustainability agenda in education' (King, 2017, p. 808).

Associate Professor Phil Bamber, Head of Department of Education Studies, Liverpool Hope University and Associate-Director of TEESNet

An extended version of this book review can be found in the British Journal of Educational Studies, published online on 11th June 2018 at the following URL:

<https://www.tandfonline.com/doi/full/10.1080/00071005.2018.1481245>

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Call for Papers

Research in Action

Special Issue 2018

Call for Papers

Research in Action is designed to encourage the sharing of ideas and innovations in teaching and learning by making connections between research and practice.

Each edition will bring together a selection of high quality research recently undertaken by Hope postgraduate students and teaching staff. We also showcase collaborations between the School of Teacher Education and our partnership schools, undertaken to advance the understanding and improvement of practice. These contributors will offer research-informed and scholarly ideas and inspiration to encourage professional learning and dialogue. The journal will include updates of new publications, details of upcoming events, and school-university partnership opportunities.

The Journal aims to support a stimulating forum for professional dialogue amongst educators within and across institutions, building networks amongst our lively professional community of new and existing teachers, teacher educators, and colleagues from partnership organisations.

PEER REVIEW

All papers for the Journal will undergo a peer review process, which is designed to be supportive and constructive, but also appropriately critical, encouraging early and developing writers to engage with confidence in the Hope Community of Practice.

We welcome papers, work-in-progress, research reports and mini articles, book reviews of relevance to the community, and abstracts of action research, projects and early initiatives.

Submissions are given an initial screening by the editor prior to scrutiny by a team of reviewers from the Journal Editorial Board. Decisions, recommendations and comments to support submission are conveyed to authors together with feedback about the paper.

GROUND-RULES FOR LAYOUT OF PAPERS

Font: Any clear Sans Serif font – Arial, Calibri (which Word will default to), Tahoma, Times New Roman, etc.

Paragraph spacing: 1.15 line spacing and 10 pts after paragraph.

Title: Use **bold CAPITALS** (18pt) for your article title.

Authors' names: Bold. Give the names of all contributing authors on the title page exactly as you wish them to appear in the published article.

Affiliations: List the affiliation of each author (department, university/school).

Correspondence details: Please provide an institutional email address for the corresponding author.

Abstract: The article should normally begin with an Abstract, no more than 200 words, headed ABSTRACT.

Keywords: Please provide five or six keywords to help readers find your article.

Headings: Please indicate the level of the section headings in your article:

First-level headings (e.g. Introduction, Study, Conclusion and /or Implications) should be in bold CAPITALS (14pt). Second-level headings should be in bold, with an initial capital letter for any proper nouns. Third-level headings should be in italics, with an initial capital letter for any proper nouns.

Author biography – maximum of 150 words.

References use Harvard in text, and supply a Reference List. This should list works referred to in the text (not just those cited) but no others. If you strongly wish to provide a Reading List which goes beyond this, please discuss with the Editor.

The following submissions are sought:

- Research reports and mini articles – of up to 3500 words
- Work in Progress – up to 2500 words
- Book Reviews -150-300 words
- Short abstracts outlining project activity, action research, initiatives for sharing, etc -300-500 words
- Event announcements and reflections – 100 words

Date for Submission: December 14th 2018. Drafts will be reviewed in January 2019.

All papers and prospective submissions for consideration to Ursula Leahy leahyu@hope.ac.uk by Friday December 14th 2018 at 4pm

Review Feedback: Start of February 2019.

Planned Publication Date: Late Spring or early Summer 2019.

Call for Reviewers and Members of the Editorial Board – The Journal Editors would like to invite interested persons to become peer reviewers or editorial board members. Please email Ursula Leahy – email as above – to express your interest.



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