



REGIONAL CENTRE OF EXPERTISE  
ON EDUCATION FOR  
SUSTAINABLE DEVELOPMENT

ACKNOWLEDGED BY



UNITED NATIONS  
UNIVERSITY

## Professional Values and Learning for Sustainability within Initial Teacher Education (ITE) Programmes and Courses

2015-18

### Final Report September 2018

#### 1. Introduction

- 1.1 The implementation of '*Teaching Scotland's Future*' (Donaldson 2010) recommendations in Scotland aimed to reconceptualise the notion of teacher professionalism 'to address challenges arising from globalisation, societal change and technological development'. In addition, through the development of a suite of Professional Standards, teacher education was more fully recognised as a learning continuum, with educators at every stage taking responsibility for the continuing development of their professional practice and with the need for teachers to become enquiring professionals at its heart.
- 1.2 In 2015 the subsequent development of the General Teaching Council for Scotland's (GTCS) Professional Standards to include Values and Learning for Sustainability as underpinning themes at every stage of an educator's career provided the impetus for partnership working between GTCS, Learning for Sustainability Scotland (Scotland's UN Regional Centre of Expertise in Education for Sustainable Development) and the Gordon Cook Foundation. The resulting partnership project supported the need for 'every practitioner, school and education leader to demonstrate learning for Sustainability in their practice' (Education Scotland 2016). The focus of this project was on the Standards for Provisional and Full Registration, addressing the needs of those entering the profession, in Initial Teacher Education (ITE), in order to improve the quality of educational experience for young people across Scotland.

#### 2. Aims and Objectives

The overall aim of this project was to help educators in Scotland to respond to the imperative to address Values and Learning for Sustainability in their teaching and learning.

- 2.1 In partnership with Scotland's ITE institutions the aim of the project was to support:

- Critical reflection of the extent to which the Learning for Sustainability dimension of the GTCS Standards, including Professional Values, is incorporated in existing and developing courses and programmes
- Changes in systemic capability to address learning for sustainability in learning and teaching;
- The development of research that explores the conceptualisation, complexity, inter-disciplinarity, pedagogy and impact on learners of learning for sustainability
- Professional learning for teacher educators

- 2.2 The objectives of the project were to:

#### Phase 1 (2015-2017)

- Develop an draft learning for sustainability reflection and development tool with collaborators from ITE Universities, NGOs and GTCS
- Apply the draft tool to programmes and courses at different stages of development
- Refine the tool and promote its use to Scottish universities

#### Phase 2 (2017-2018)

- Extend the scope of the project to include a school based focus, with an emphasis on newly qualified teachers
- Review the use of the Reflection Tool in the context of the Standard for Full Registration and Career Long Professional Learning Professional Standards

- Explore the impact of ITE approaches to values and learning for sustainability on the thinking and practice of newly qualified teachers
- Deepen and enhance their thinking with regard to their professional values and how these can be used more effectively in the context of their everyday teaching.

### **3. Project Outputs**

#### **3.1 Phase One**

Phase 1 of the project was developed with academics in the universities of Aberdeen, Dundee, Edinburgh, Glasgow, Stirling, Strathclyde, the West of Scotland and University of the Highlands and Islands and supported by Scotland's United Nations recognised Regional Centre of Expertise on Education for Sustainable Development ('Learning for Sustainability Scotland' - LfS Scotland) , and the General Teaching Council for Scotland.

##### **3.1.1 Engagement of ITE institutions**

At the outset high-level engagement was achieved through contact with the Scottish Council of Deans of Education from all eight institutions (Universities of Aberdeen, Dundee, Edinburgh, Glasgow, Strathclyde, Stirling, The West of Scotland, The University of Highlands and Islands). Two ITE participants were nominated from each institution to collaborate in a community of practice, one with Values and Learning for Sustainability expertise, the second with a senior leadership role (Appendix A).

##### **3.1.2 Community of Practice**

The project was delivered through considerable ongoing collaborative working, both in face to face workshops and online engagement throughout the three-year project (Appendix B).

##### **3.1.3 Reflection and Development Tool**

In the early part of the project the Community of practice drafted a paper- based Reflection and Development tool to support teacher educators in embedding Values and Learning for Sustainability in their courses and programmes to meet the Standards for Registration (Appendix C ).

Following discussion with members of the Community of Practice a digital version based as a microsite on the GTCS website was developed, enabling wider staff engagement across all the institutions. This new feature resulted in the production of a microsite that was piloted in Universities during the period of the project. Ongoing feedback from University users allowed the microsite to be regularly revised, ensuring its functionality.

<http://www.gtcs.org.uk/LearningforSustainability/lfs-homepage.aspx>

(Appendix D).

##### **3.1.4 Development of ITE Courses and programmes**

Support was provided to Universities, where requested, to introduce the process of applying the reflection and development tool to programmes at different stages of development (Appendix E). In a number of institutions these meetings were for all ITE staff and were aligned with the GTCS programme accreditation process and the requirement for institutions to integrate values and learning for sustainability in their programmes This is now key to the accreditation of any ITE programme.

Progress on the development of courses and programmes was shared in meetings and workshops (Appendix B).

##### **3.1.5 Research**

A Research Sub Group was formed, with members from three of the ITE institutions (Universities of Edinburgh, Aberdeen, Strathclyde). This resulted in agreement by the Scottish Educational Review to devote a special issue to Values and Learning for Sustainability in 2019. A call for papers from the Group resulted in the submission of twelve research abstracts. Of these six were selected for publication (Appendix F) and are currently in the process of peer review. The foreword for the Special Edition will be written by Professor Aaron Benavot, formerly Director of the UNESCO Global Education Monitoring report.

##### **3.1.6 Wider Engagement**

During the period of the project there was considerable engagement at conferences and seminars in Scotland, UK and internationally by members of the Community of Practice to extend its reach and influence (Appendix G).

### **3.2 Phase Two**

The focus of Phase two was on working with a small number of 2017-2018 newly qualified teachers (NQTs) from each of the eight ITE institutions to support them as they worked to complete the Teacher Induction Scheme, reach the Standard for Full Registration and begin their transition towards Career Long Professional Learning. The focus was on their development of a Practitioner Enquiry around an aspect of Values and Learning for Sustainability.

#### **3.2.1 Recruitment and engagement of NQTs**

Twenty two probationary teachers, graduates drawn from all eight ITE institutions, were recruited in liaison with Scotland's Probationer Support Managers Network. Of these twelve were from primary schools and ten from secondary schools across Scotland (Appendix H). Professional advice and support was provided, from January to May 2018, through two Webinars run by GTCS and LfS Scotland followed by a facilitated online discussion forum (Appendix I).

#### **3.2.2 Values and Learning for Sustainability Practitioner enquiries**

All twenty two NQTs engaged in a values and learning for sustainability focused practitioner enquiry and provided written submissions. The themes of these enquiries can be found in Appendix J . A selection of the Practitioner Enquiries were shared at a seminar examining the value of Practitioner Enquiry held at Moray House in June 2018 (Appendix K), it is intended that all the practitioner enquiries will be shared on the GTCS website.

### **4. Project Impact**

#### **4.1 University Courses and Programmes**

To complement the increasing Government priority afforded to the role of values and learning for sustainability in courses and programmes the Reflection and Development Tool microsite on the GTCS website has provided an ongoing significant support to all of Scotland's ITE institutions. Developed in collaboration with staff this has enabled them to consider current and future provision and develop programmes which have at their core Values and Learning for Sustainability as required by the GTCS Professional Standards. During the period of the project this has been reflected in a new GTCS Accreditation Framework and an increased integration of Values and Learning for Sustainability in University courses and programmes that have been submitted for accreditation.

#### **4.2 University Staff**

This work has resulted in an increased level of collaborative thinking and discussions on Values Education and Learning for Sustainability within and across the ITE institutions. Participants in the Community of Practice have valued the sharing of approaches and practice. They have contributed to research and practice development and are likely to continue to do so. Heightened awareness across all University staff has resulted in whole institution approaches to values and learning for sustainability, demonstrated in new core courses and programmes.

#### **4.3 Student teachers**

Evidence from the newly qualified teachers engaged in practitioner enquiry through the project indicated that student teachers are being inspired to address the values and Learning for Sustainability requirements of the GTCS Professional Standards in their ITE courses. When asked why they were interested in the Professional Values and Learning for Sustainability practitioner enquiry opportunity NQTs expressed an interest in continuing to develop their practice to have a positive impact on their learners (Appendix M).

In those schools where learners were engaged in values and learning for sustainability activities the NQTs reported considerable positive benefits for their students (Appendix N) .

#### **4.4 Wider Education System**

The Reflection and Development tool responded to the needs of the 2013 GTCS Professional Standards. We expect Values and Learning for Sustainability to be strengthened in the upcoming review of the Standards and the outputs of this project are making a strong contribution to the work of the Review Learning for Sustainability Sub Group.

This project was highlighted in the Scottish Government's Vision 2030+ Report of the National LfS Implementation group (Education Scotland 2016) and has also been included in the upcoming Scottish Government Vision 2030+ Action Plan. The new Initial Teacher Education self -evaluation Framework (Education Scotland 2018) highlights the importance of values and learning for sustainability in the student experience.

Our work in Scotland is innovative and is receiving acclaim at conferences in the UK and internationally. It will be shared at the International Congress for School Effectiveness and improvement (ICSEI) conference in January 2019.

## **5. Reflections and Next Steps**

### **5.1 International and National Policy drivers**

Substantial international and national developments have strengthened the importance of this work during the period of the project. In 2015 'Transforming our World, the UN Sustainable Development Goals (SDGs) 2015-2030 were agreed by nations across the world, including Scotland. Scotland's National Performance Framework (<http://nationalperformance.gov.scot>) has been reviewed to reflect the need to achieve the Goals, including SDG 4.7 which addresses Learning for Sustainability and teacher education. Scotland's learners will take the new OECD PISA Global Competence test in 2018/19 designed to test tolerance, cultural awareness and how well learners can distinguish between reliable sources of information and fake news.

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### **5.2 Opportunities for System Change in ITE**

This project was undertaken at a time of significant change and with ongoing challenges in ITE in Scotland. This resulted in changes in personnel and programmes which provided both a challenge and an opportunity for the influence of courses and programmes. Undoubtedly this is a long term project and requires changes in culture that are just beginning and will need to be sustained. The upcoming review of the GTCS Standards and recent revision of the accreditation framework to include stronger focus on values and learning for sustainability provide further opportunities for system change. During the course of the project an additional two Universities ( Napier and Queen Margaret) have been asked to submit programmes for ITE accreditation and there will be a need to engage them in addressing Values and Learning for Sustainability in their teaching and learning.

### **5.3 Next Steps**

Our engagement with NQTs and the Vision 2030+ Report launched by Minister Shirley-Anne Somerville in September 2017, have indicated a need for an increased leadership focus on values and Learning for Sustainability to bring about wider system change. . In addition to maintaining ongoing engagement with all eight Initial Teacher Education institutions and initiate engagement in Napier and Queen Margaret Universities there is now a need to extend the school based scope of the project to include an emphasis on school leaders. The use of the Reflection Tool will need to be in the context of the upcoming Professional Standards Review, with a focus on the Leadership Standards. In addition there will be a need to deepen and enhance the thinking and learning of school leaders with regard to their professional values and learning for sustainability and how these can be used to engender a whole school approach.

## **REFERENCES**

Donaldson, G. (2010), *Teaching Scotland's Future*: Report of a review of teacher education in Scotland, Scottish Government, Edinburgh.

Education Scotland (2016) *Vision 2030+* the Concluding Report of the National Learning for Sustainability Implementation Group <https://education.gov.scot/improvement/documents/res1-vision-2030.pdf>

Education Scotland (2018) Initial Teacher Education self-evaluation framework

GTCS (2013) Professional Standards. Available at <http://www.gtcs.org.uk/professional-standards/professional-standards.aspx>

GTCS (2018) Evaluation Framework: Accreditation of programmes of Initial Teacher Education Available at: <http://www.gtcs.org.uk/web/FILES/education-in-scotland/evaluation-framework-accreditation-of-programmes-of-ITE-in-Scotland.pdf>

Global Education Monitoring Report (2016)

Available at: <http://unesdoc.unesco.org/images/0024/002457/245752e.pdf>

## APPENDIX A COMMUNITY OF PRACTICE: PARTICIPANTS

UNIVERSITY	STAFF MEMBERS INVOLVED
Aberdeen	Archie Graham, Curriculum Programmes ITE Laura Colucci-Gray, Senior Lecturer, Values Education and Sustainable Education Elizabeth Curtis, Lecturer
Dundee	Teresa R Moran, Depute Dean, School of Education and Social Work Carrie McLennan, Senior Lecturer, programme Director MA Education Alexia Barrable, Lecturer
Edinburgh	Robbie Nicol, Head of Institute for Education, Teaching & Leadership Lesley Reid, Director of Under-Graduate Studies (to 2017) Ann Rae, Programme Director for the MA
Glasgow	Moyra Boland, Director Learning and Teaching Jesus Granados Sanchez, Lecturer (to 2017) Alan Britton, Senior Lecturer
Highlands and Islands	Lindsay Nicol, PGDE (Primary) programme leader Mark Highfield, Lecturer
Stirling	John l'Anson, Director of ITE, School of Education Jane Smithson, Teaching Fellow, Primary Education
Strathclyde	Sharon Jessop, Lecturer Claire Cassidy, Depute Head of School
West of Scotland	Louise Barrett, Senior Lecturer in ITE Louise McKie, Lecturer in ITE

## APPENDIX B COMMUNITY OF PRACTICE: WORKSHOPS

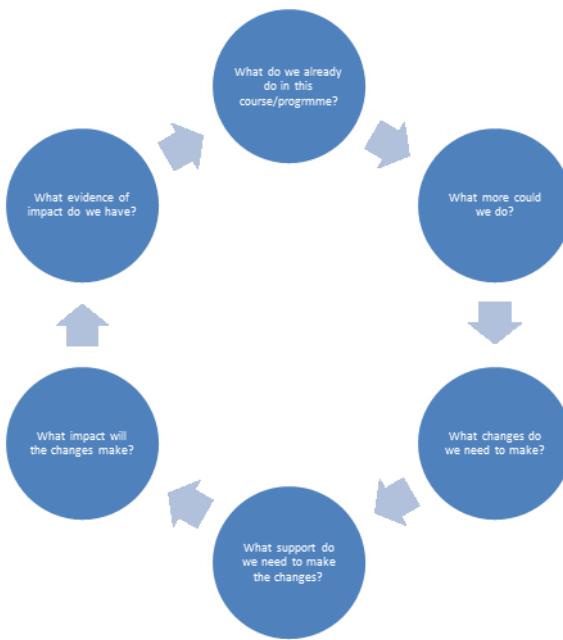
Moray House, University of Edinburgh	Purpose
3 <sup>rd</sup> December 2015	Inception meeting of Community of Practice
10 <sup>th</sup> February 2016	Sharing the current situation in ITEs, introducing the reflection and development tool And considering its use within the various ITEs, sharing ideas and seeking support
7 <sup>th</sup> June 2016	Sharing progress and plans for 2016-17, developing the reflection and development tool microsite, sharing ideas and seeking support
1 <sup>st</sup> December 2016	Reviewing the Reflection Tool microsite, providing an update and consider next steps for Research subgroup, sharing progress on action plans
29th August 2017	Update on current Scotland and international context, review of Reflection Tool microsite, sharing progress on action plans, special edition of Scottish educational review, newly qualified teachers practitioner enquiry.
8 <sup>th</sup> May 2018	Update on current Update on current Scotland and international context, update on Reflection Tool microsite and special edition of Scottish educational review and newly qualified teachers practitioner enquiry, Workshop 'making progress in institutions'.

## APPENDIX C

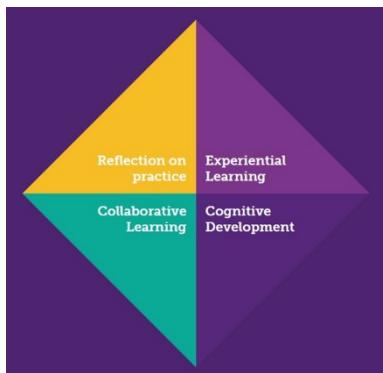
### VALUES AND LEARNING FOR SUSTAINABILITY REFLECTION AND DEVELOPMENT TOOL

This tool is designed to provide critical questions about the provision made for Values and Learning for Sustainability in all aspects of the education of new teachers. It provides reflective questions that can be used to interrogate existing courses or programme or those that are in development and create opportunities for professional dialogue, using the following reflective enquiry process.

#### *Reflecting on Values and Learning for Sustainability in ITE courses and programmes*



This process is intended to complement the model of professional learning of teachers at every stage of their career used by the GTCS and Education Scotland. This model has been generated from research<sup>1</sup> exploring the relationship between professional learning and the enhancement of practice.



The elements of this model are four inter-related processes that support transformation of practice.

- **Reflection on/in practice:** where through professional learning practitioners are curious about and critically explore practice.
- **Experiential learning:** learning through structured activities to question, try out and enhance practice
- **Cognitive development:** developing ideas to challenge assumptions and deepen understanding of practice
- **Collaborative learning:** learning with and through others to enhance practice.

### Learning to be: Exploring Professional Values and Personal Commitment

**'Addresses the development of personal attributes and ability to act with greater autonomy, judgement and personal responsibility in relation to sustainability'<sup>2</sup>.**

<sup>1</sup> Reeves, J. and Fox, A. (2008) Eds *Practice-based learning: Developing Excellence in Teaching*, Edinburgh: Dunedin Academic Press.

<sup>2</sup> The Framework is drawn from UNECE 2011(United Nations Economic Commission for Europe) Learning for the Future: Competences in Education for Sustainable Development

[http://www.unece.org/fileadmin/DAM/env/esd/ESD\\_Publications/Competences\\_Publication.pdf](http://www.unece.org/fileadmin/DAM/env/esd/ESD_Publications/Competences_Publication.pdf)

**In this area of learning How do you currently..**

**What more could you do to..**

**What actions do you need to take to**

**What support do you require a) from within the university b) from elsewhere? to..**

### **Explore**

- the recognition that teaching is not value-neutral but is rooted within the context of place, culture and society?
- the value of social, cultural and ecological diversity as well as building awareness and respect?
- how the learning context and process can reflect values, beliefs and assumptions about social justice, democracy, inclusion, equality and sustainability?
- the possible inequalities that might exist in every teaching context?
- whether students' practices and assumptions are inclusive?
- how students exercise their own rights and their responsibilities in relation to current and future generations?

**Enable** students to

- clarify value positions, particularly in relation to sustainability, equality and social justice?
- have and value direct experiences of nature?
- consider the links between rights and responsibilities?
- reflect individually and collaboratively on how the course has impacted on their personal and professional values?

### **Challenge**

- students' assumptions and judgements about people, society, the natural environment, education and the wider world?

**Enhance** students'

- professional awareness of the evolving nature of their values and actions
- connection to a sense of place and sense of community in ways that are stimulating, challenging, relevant

## **Learning to know: Professional Knowledge and Understanding**

**'Understand the challenges facing society locally and globally and the potential role of educators and learners<sup>3</sup>**

**In this area of learning**

**How do you currently encourage students to ..**

**What more could you do to encourage students to..**

**What actions do you need to take to encourage students to..**

**What support do you require a) from within the university b) from elsewhere to encourage students to..**

### **Explore**

- its relationship to real-world social, ecological and economic issues of the local community and wider world?
- approaches to interdisciplinary learning using real-world social, ecological and economic themes or issues?

**Consider**

- opportunities to make connections with other aspects of their course, other areas of subject knowledge and other aspects of the ITE programme?

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<sup>3</sup> The Framework is drawn from UNECE 2011(United Nations Economic Commission for Europe) Learning for the Future: Competences in Education for Sustainable Development

[http://www.unece.org/fileadmin/DAM/env/esd/ESD\\_Publications/Competences\\_Publication.pdf](http://www.unece.org/fileadmin/DAM/env/esd/ESD_Publications/Competences_Publication.pdf)

- theories that knowledge is constructed, continually emerging and liable to change and explore how this could be addressed professionally?

#### **Reflect**

- on and address the remaining gaps in their learning on values and learning for sustainability, in relation to professional skills, knowledge and understanding?

### **Learning to do and Learning to live together<sup>4</sup>: Professional Skills and Abilities**

**'Developing practical skills and action competence in Learning for Sustainability'**

**'Development of partnerships and an appreciation of interdependence, pluralism, mutual understanding and peace'**

**In this area of learning... How do you currently encourage students to**

**What more could you do to encourage students to..**

**What actions do you need to take to encourage students to..**

**What support do you require a) from within the university b) from elsewhere? to encourage students to..**

#### **Develop**

- the value and potential of, and use learning outside the classroom to support learning in the context of sustainability, equity and justice?
- critical thinking, including concepts of what counts as evidence, particularly when readings contradict their position or practice?
- the ability to ask critical questions, analyse critically, spot bias and evaluate?
- the ability to debate and challenge the views of their tutors, the content of their programmes and those in power?
- systems thinking skills to understand the interdependent nature of the world
- creative thinking skills to explore and envision alternative futures?

#### **Participate**

- actively, individually and/or collectively, in real world issues of sustainability, equity and justice?
- in arguing a case and listening respectfully to other people's worldviews and perspectives, particularly in relation to open-ended, complex, controversial or emotional issues ?
- in making informed choices based on critical evaluation of the options open to them?
- with confidence and the skills to act on choices in issues of sustainability, equity and justice beyond their studies and the University?
- in addressing, individually and collaboratively, their rights and responsibilities in relation to the communities in which they will work and the wider world?
- in decision making about their learning experiences in relation to sustainability, equality and social justice.

#### **Reflect**

- on what they have learned about pedagogy in addressing values and learning for sustainability and experiment with new and innovative approaches to learning?

**February 2016**

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<sup>4</sup> The Framework is drawn from UNECE 2011(United Nations Economic Commission for Europe) Learning for the Future: Competences in Education for Sustainable Development

[http://www.unece.org/fileadmin/DAM/env/esd/ESD\\_Publications/Competences\\_Publication.pdf](http://www.unece.org/fileadmin/DAM/env/esd/ESD_Publications/Competences_Publication.pdf)

## APPENDIX D LEARNING FOR SUSTAINABILITY GTCS MICROSITE

<http://www.gtcs.org.uk/professional-standards/learning-for-sustainability.aspx>

The professional actions, values, skills and knowledge of Learning for Sustainability are embedded within the Standards for Registration/Career-Long Professional Learning/Leadership and Management, recognising that all teachers should be confident in their knowledge and understanding of the challenges facing society locally and globally. (GTCS 2012)

### LEARNING FOR SUSTAINABILITY MICROSITE FOR UNIVERSITY PROGRAMME DESIGNERS

This microsite is designed to help our colleagues at Universities to easily access information related to Learning for Sustainability and Professional Values, and to help them build these into their Initial Teacher Education courses and programmes.

The site includes a Reflection Tool to allow staff involved in programme design and development to review current - and develop new - modules, course and programmes with Values and Learning for Sustainability in mind.

[Homepage](#)

 **LEARNING FOR SUSTAINABILITY**

[Home](#) [What is Learning for Sustainability?](#) [Professional Values](#) [Policy Context](#) [Reflection Tool](#) [Resources](#)

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**WELCOME TO LEARNING FOR SUSTAINABILITY MICROSITE**

This tool aims to help you as a teacher educator and your students to engage with and reflect on Values and Learning for Sustainability. It can be used both by you as an individuals or with colleagues to develop a shared understanding through reflection, discussion and action.



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**WHAT IS LEARNING FOR SUSTAINABILITY**

Learning for Sustainability permeates and underpins the GTCS Standards.

[Read more](#)

**PROFESSIONAL VALUES**

Educational experiences of learners are shaped by the values and dispositions of those who educate them.

[Read more](#)

**REFLECTION TOOL**



Please use your institution login details to access the Reflection Tool.

[Log-in](#)

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**POLICY CONTEXT**

Learning for Sustainability is a priority for the Scottish Government and Scotland's education professionals.

[Read more](#)

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**RESOURCES**

Within this area you will find further reading, videos and links to various reports.

[Read more](#)

## **APPENDIX E TARGETED SUPPORT FOR ITE INSTITUTIONS**

<b>University</b>	<b>Nature of Support</b>
Aberdeen	19 May 2016 Action Plan Meeting with key staff January 2018 Full Staff meeting to consider Values and LfS in programmes
Dundee	4 <sup>th</sup> April 2016 Action Plan Meeting with key staff 16 June 2016 Presentation to all ITE staff  August 2016 Full Staff meeting to consider Values and LfS in programmes
Edinburgh	20 May 2016 Action Plan Meeting with key staff December 2016 Meeting with key staff to develop strategy to engage whole School February 2017 Full Staff meeting to consider Values and LfS in programmes
Glasgow	24 May 2016 Action Plan Meeting with key staff
Highlands and Islands	October 2016 Support to enable an audit of the undergraduate programme
Stirling	May 27 <sup>th</sup> 2016 Action Plan Meeting with key staff
Strathclyde	May 24 <sup>th</sup> 2016 Action Plan Meeting with key staff
West of Scotland	30 August 2017 Full Staff meeting to consider Values and LfS in programmes

## **APPENDIX F SPECIAL ISSUE OF SCOTTISH EDUCATIONAL REVIEW**

### **Education re-reviewed: putting sustainability at the heart of living**

#### **1. Call for papers**

Amongst the greatest challenges that current, globalised societies are facing is the elaboration of models of development which are sustainable, that is, they can fulfil the needs of all people within a fast-changing and fast-eroding natural environment. With more than 80% of populations currently living in urban contexts, pressure on natural resources has never been greater. The explosion of violent conflicts in all corners of the Earth call for a reconciliation of ecology with equity, a de-colonising of the mind and the body, and a re-appraisal of the value of life and the natural systems that are hosting us and upon which totally depend.

Sustainability is a multi-faceted and contested term, posing questions arising at the interface between three, interconnected dimensions; Environment, Economics, and Society. Within this triangle, education, and teacher education can play a significant role. New ways of thinking in the world can be supported by different ways of educating, encompassing the social, political, and ethical spheres.

This special issue of *Scottish Education Review* aims to bring together a diversity of contributions from scholars and practitioners in different fields to situate ‘Learning for Sustainability’ in the current educational landscape. The editors invite contributors from a range of disciplines and sectors to stimulate dialogue on the different aspects of ‘Learning for Sustainability’, from outdoor and environmental education, to values education, human rights, artistic practices, and business studies amongst many. We encourage contributions focussed on policy implementation as well as empirical studies and new theorising in the field to inform and shape this important area of children and teacher education in meaningful and creative ways.

#### **2. Table of contents**

**From the Editors** (Robbie Nicol, Laura Colucci-Grey, Clare Cassidy, Betsy King)

**Foreword** – Aaron Benavot, School of Education at Albany and formerly Director, Global Education Monitoring report UNESCO Paris

#### **1. Teachers as Global Learners: Evidence for Sustainable Change**

*Alan Britton (University of Glasgow School of Education) and Tanya Wisely (Oxfam Scotland)*

#### **2. Moving Beyond the Printed Word of Policy to Practice: an Exploration into the Conditions in Which Learning for Sustainability Might Flourish in Initial Teacher Education.**

*Robbie Nicol, Rosa Murray and Ann Rae (University of Edinburgh)*

#### **3. Making Sense of Place: developing a geocache trail for place-responsive science education for sustainability.**

*Sandra Eady and Greg Mannion (University of Stirling)*

#### **4. Student Teachers Learning for Sustainability: rights, democracy and social justice**

*Claire Cassidy and Sharon Jessop (University of Strathclyde)*

#### **5. Primary education students' engagement with socio-scientific discussion as an approach to learning for sustainability.**

*Stephen P. Day, Louise Scott-Mckie and Andrew Killen (School of Education, University of the West of Scotland, UK)*

#### **6. “It’s not my responsibility, is it?” Examining the policy vision and the professional reality of enacting Learning for Sustainability within the Broad General Educational phase in Scottish schools.**

*Christie, B., Collacott, M., Higgins, P., King, B., Kirk, K. (University of Edinburgh)*

#### **7. From oil to soil. Learning for Sustainability and transitions within the school garden: a project of cultural and social re-learning.**

*Colucci-Gray\*, L., Gray\*, D., Donald\*\*, R., Kiryacou\*, A., Wodah\*, D. (\*School of Education, University of Aberdeen; \*\*One Seed Forward (OSF)*

## APPENDIX G PRESENTATIONS AT NATIONAL AND INTERNATIONAL CONFERENCES

Event	Theme	Representative (s)
Scottish Educational Research Association (SERA) Conference November 2016	Round Table Discussion <b><i>Reconceptualising Education- Learning for Life</i></b>	Betsy King :Learning for Sustainability Scotland; Ellen Doherty GTCS, Teresa Moran (University of Dundee), Laura Colucci-Gray and Liz Curtis (University of Aberdeen)
New Education Forum (NEF) - European Parliament – Brussels November 2016	<b><i>Values and Learning for Sustainability and their impact on the life chances of young people.</i></b>	Ellen Docherty, GTCS
UK Teacher Education for Environment and Equity Seminar, Moray House, 10 March 2017	<b><i>Meeting the UN's Sustainable Development Goals in ITE.</i></b> Sharing progress on values and learning for sustainability in ITE in all the UK regions; Connecting ITE practitioners and identifying synergies; Identifying opportunities for possible future advocacy and research collaboration	The seminar attracted 18 participants from across the UK. Report on LfS Scotland website
New Education Forum (NEF) – Turin May 2017	<b><i>Values and Learning for Sustainability and their impact on the life chances of young people.</i></b>	Ellen Docherty, GTCS
National probationer Managers Seminar October 2017, GTCS	<b><i>Values and learning for Sustainability in teacher education</i></b>	Ellen Docherty and Betsy King
European Regional Centres of Expertise Conference, University of Brittany August 2018	<b><i>Addressing SDG 4.7: Values and learning for sustainability in initial teacher education</i></b>	Betsy King LfS Scotland
In preparation International Congress for School Effectiveness and improvement (ICSEI) conference in January 2019	Paper: <b><i>Nurturing leadership for a sustainable future</i></b> Workshop: <b><i>Joining the Leadership Dots – from policy to practice in Learning for Sustainability</i></b>	Ellen Docherty and Betsy King

**APPENDIX H PARTICIPANTS: VALUES AND LEARNING FOR SUSTAINABILITY PRACTITIONER ENQUIRIES**

Participant		ITE Institution	School
Abigail	Treffry	UHI	Sgoil Uibhist a' Tuath
Adrienne	Maclean	Glasgow	St. Andrew's Academy
Alix	Speed	Strathclyde	Brechin High School
Brydon	Forsyth	Strathclyde	Busby Primary
Carlyn	Anderson	UWS (Ayr campus)	Castlepark Primary School
Christopher	Herdman	UHI (Orkney College)	Kirkwall Grammar School
Claire	Andrews	Edinburgh	Kilchuimen Academy
Efseveia	Pexara	Democritus University of Thrace, Greece	St David's R.C. Primary School
Emma	Cooper	Strathclyde	Farr High School
Fiona	Blaney	Edinburgh	Lilliesleaf Primary School
Fiona	Mair	Edinburgh	Kingsland Primary School
Graeme	Galloway	Strathclyde	Alloa Academy
Holly	Cousins	Glasgow (Dumfries Campus)	Cowie Primary School
Jennifer	Skinner	Edinburgh	West Linton Primary School
Jessica	Eagers-Hardie	Glasgow	St Thomas' Primary School
Jonathan	Younge	Strathclyde	The Glasgow Academy
Katherine	Kane	Aberdeen	Greenbrae School
Kirsten	Douglas	Strathclyde	St Ninian's High School
Lisa	Macintyre	Strathclyde	Braidbar Primary School
Louise	Ross	UHI	Bridgend Primary
Mark	Fraser	UWS	St John Ogilvie Primary
Sarah	Henderson	Dundee	Stirling High School

**APPENDIX I PROGRAMME: VALUES AND LFS IN TEACHER EDUCATION**

Dates 2018	Activity
Jan 8 <sup>th</sup> - 16th	<b>DISCUSSION FORUM 1: Join the Group on Learn</b>
Webinar 1 Jan 16 <sup>th</sup>	<b>WEBINAR: Introduction to Values, Learning for Sustainability and Practitioner Enquiry</b>
Jan 16 <sup>th</sup> – Feb 20 <sup>th</sup>	<b>DISCUSSION FORUM 2: Your Practitioner enquiry focus</b>
Webinar 2 February 20 <sup>th</sup> 2018	<b>WEBINAR: Values and learning for sustainability in practitioner enquiry -2-</b> <b>What is the focus of your enquiry? How will you carry out the enquiry? Evidence and reporting</b>
February 21 <sup>st</sup> – March 19 <sup>th</sup>	<b>DISCUSSION FORUM 3: Gathering Evidence</b>
March 13 <sup>th</sup> 4-5pm (optional)	<b>COLLABORATE SESSION on Learn: Action Plan submissions</b> .
March 19 <sup>th</sup>	<b>TASK 1: Submit your Draft Practitioner Enquiry Action Plan on Learn</b>
March 20 <sup>th</sup> – May 20 <sup>th</sup>	<b>DISCUSSION FORUM 4: Reflecting on the GTCS Professional Standards</b>
March 20 <sup>th</sup> - May 20th	<b>DISCUSSION FORUM 5: Taking Action and Assessing Impact</b>
May 8 <sup>th</sup> 4-5pm (optional)	<b>COLLABORATE SESSION on Learn: Practitioner Enquiry report/presentation</b>
May 21 <sup>st</sup> 2018	<b>TASK 2: Submit your practitioner enquiry presentation/report on Learn</b>
June 2018 )	Seminar, Edinburgh

## **APPENDIX J THEMES: VALUES AND LEARNING FOR SUSTAINABILITY PRACTITIONER ENQUIRY QUESTIONS**

<b>Enquiry Questions</b>
How can I increase children's understanding of the impact of their choices on the wider world?
Does allowing pupils to write their own real-life design briefs increase awareness of the role and impact of sustainable design on a more sustainable world?
How can outdoor learning increase motivation within literacy?
Interdisciplinary Learning through Learning for Sustainability
How can childrens' positive mindset be improved to allow them to reach their full potential?
The impact of learning for sustainability approaches on longterm decision making
Does Learning for Sustainability increase awareness and active participation in recycling?
To what extent do Outdoor Journeys increase pupil engagement in report writing in Geography?
How can I encourage learners to improve their local community?
In what ways and to what extent do I encourage pupil voice and participation in my practice?
What happens when I teach my high ability maths class outdoors?
Can we improve learner's appreciation of their poutside environment through learning for sustainability and empower them to actively make changes?
How can the 'Global Goals' be explored with Early Years pupils?
What impact can Forest Schools have on a child's confidence to share and value their ideas in a group setting?
What effect does outdoor learning have on attainment in literacy?
How can pupils' attitudes to reducing plastic waste be changed?
Can teaching maths outside improve engagement of least able pupils?
An investigation into the impact of digital technology on learning in the classroom in S2 pupils.
How does teaching through the Storyline approach impact on learners' views on Learning for Sustainability; specifically sustainable cities and communities?
How do outdoor learning experiences influence the writing success of a group of P6 pupils?
How can I effectively use the context of learning for sustainability to develop listening and talking skills in infants in order to raise attainment in Literacy and English?
Promoting social justice through encouragement of outdoor learning

## APPENDIX K SELECTED EXAMPLES: VALUES AND LEARNING FOR SUSTAINABILITY PRACTITIONER ENQUIRIES

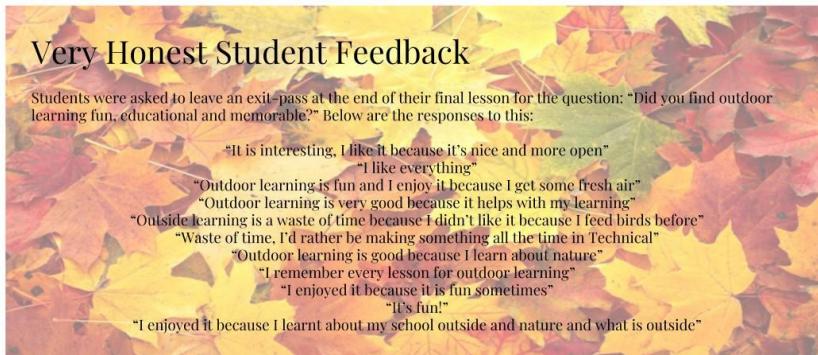
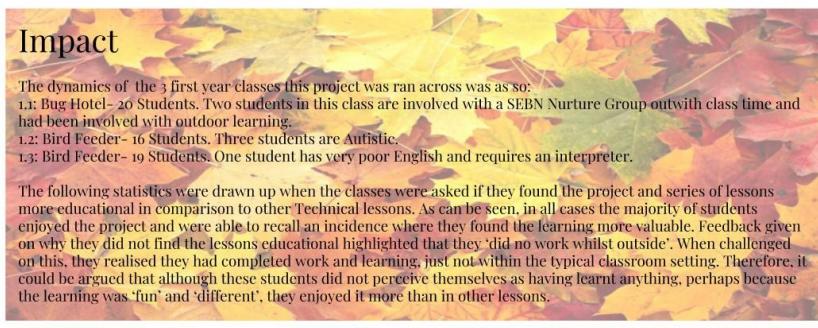
1. Does allowing pupils to write their own real-life design briefs increase awareness of the role and impact of sustainable design on a more sustainable world? Adrienne MacLean

<https://prezi.com/view/1lyLw5LfBehwaLNuGnGW/>

2. What impact can Forest Schools have on a child's confidence to share and value their ideas in a group setting? Jennifer Skinner

<https://prezi.com/view/KXDlvyFZY7Tyvck72Fr2/>

3. IDL through learning for Sustainability Alix Speed



## APPENDIX L SELECTED Quotes from NQTs BASELINE QUESTIONNAIRE –VALUES AND LfS

*'This opportunity fits with my professional development target to increase my understanding of Learning for Sustainability, in addition to complimenting learning through community partnership planned for term 3 this year'.  
Abigail Treffrey*

*'I feel learning for sustainability is not only compatible with CfE but is integral to fostering attitudes and skills that will positively impact our world and society. I believe that my subject – Art & Design – can be used as vehicle to encourage debate, develop opinion and to consider another perspective. I also believe in teaching in a way that recognises real world issues, imparting to pupils the skills to solve tangible problems and importantly the belief that they have the power to make a difference'. Adrienne Maclean*

*'Sustainability, especially in the field of outdoor learning, has always been a big interest of mine and over the last year of undertaking a PGDE as well as entering my probation year as an NQT teacher, I feel I am constantly trying to be innovative in my practice to embed sustainability into my pedagogy'. Alix Speed*

*'I am keen to learn how I can develop my teaching further and plan for the future. I am keen to examine the sustainability goals and link these into the school's improvement plan and within my day to day teaching practice within my own classroom'. Brydon Forsyth*

*'I am very interested in how we can improve children's knowledge of learning for sustainability and the part I can play in this. As learning for sustainability is one of the Government's priorities, it is important that we as a profession do everything we can to embed these values in our children and young people in order that they have the knowledge they need to live and work in a sustainable and equitable way. Carlyn Anderson*

*'As a geographer, so many of LfS's umbrella themes naturally reflect curriculum areas, however how we teach it and how frequently are key considerations to ensure it is meaningful for learners' Claire Andrews*

*'I would like to explore current pupil attitudes & behaviour pertaining to up-cycling & re-cycling with a view to waste reduction in the first instance, and materials reuse where practicable' Christopher Herdman.*

*I seek to focus on rights, responsibility and citizenship with the hoped outcome that students have greater awareness both of their rights and role and a desire to take part in Scottish decision making. Emma Cooper*

*I am interested in this practitioner enquiry as an opportunity to increase my knowledge, understanding and teaching skills in this area...to investigate how I might better engage the learners and increase their sense of the wider world and their subsequent roles as world citizens. Fiona Blaney*

*Sustainability and global goals are something that I was passionate about before I started teaching, but so far I don't feel that I am managing to address many of these issues adequately in my teaching.*

*I am hoping that this practitioner enquiry will help me to focus and reflect upon why this might be the case, and look at ways that I can embed learning for sustainability in my practice both now, and in my future career. Fiona Mair*

*LfS is a foundation to education and with strong links to my subjects I am passionate at developing this topic.*

**Graeme Galloway**

*This enquiry would provide me with an opportunity to directly link professional values and sustainability; which would demonstrate commitment to guiding and encouraging my learners to prepare for their own future; while developing awareness of their impact and importance in society.**Holly Cousins***

*From experience, I know that many teachers do not feel comfortable/confident to facilitate outdoor learning and teaching for sustainability. I would like to find out why this may be the case and how we could bring about change in my school.*

**Jennifer Skinner**

*My own values, and the importance I attach to ensuring children's awareness of their role in sustainability, is reflected in my participation in outdoor CLPL, management of the school JRSO committee and involvement in Nurture group activities.*

**Jessica Eagers Hardy**

*I think that it is vital to be exploring how we as practitioners can make our teaching as relevant to the outside world as possible.*

**Jonathan Younge**

*I am particularly interested in the Outdoor Learning aspect of Learning for Sustainability and the way that we can use our local environment to help children better understand the world around them and put their classroom learning into a real-world context.*

**Katie Kane**

*I feel that Learning for Sustainability is essential for well-being and is a main concern for all.*

**Kirsten Douglas**

## **APPENDIX M PRACTITIONER ENQUIRY NQT REFLECTIONS**

*"Participation in the programme increased my knowledge and understanding of Learning for Sustainability' Online collaboration with peers during the programme was particularly helpful in signposting areas for further development within Learning for Sustainability' **Abigail Treffrey***

*'I felt muenergiswd to deliver information to students on the importance of sustainability, the environment and the woodwork project. As a result students bought into this enthusiasm and participated positively, especially taking pride in their practical project of a bird feeder and bug hotel' **Alix Speed***

*'I now understand the importance of encouraging a positive mindset and resilience, providing children with the tools not the answers. I now feel these skills are embedded into my practice and I will more confidently and explicitly teach them to learners. **Carlyn Anderson***

*'Overall I consider my intervention to have been a modest success with both learner awareness of the issues (or recycling and upcycling) and active participation increased. **Chris Herdman***

*'This practitioner enquiry has been empowering and I have found that by taking learners through the process of choosing a question based on a real-life topic they are interested in deepens learner understanding, confidence, enjoyment, motivation and attainment in geographical report writing' **Claire Andrews***

*'The main impact this had is on my own teaching. I learned to step back and give students space to come to their own conclusions. The successes came from students' engagement and willingness to get involved in discussions.' **Emma Cooper***

*'I have learned that teaching maths outdoors is a good way to get learners to apply and consolidate their skills in an authentic way'. **Fiona Mair***

*'S2 pupils in my school completed a Learning for Sustainability Interdisciplinary learning course. They benefitted from learning outdoors and working in their community and felt proud to have made a difference. I will continue to build in opportunities for pupils to appreciate where they live' **Graeme Galloway***

*'This opportunity provided a reflective opportunity to see how LfS can be embedded into learning within the early years in a fun and engaging way. Giving learners in the arly years a chance to lead and create an environment has engaged their learning while showing wider values and their caring nature to want to help minibeasts have the best world to live in' **Holly Cousins***

*'This has highlighted the importance of children having engaging and creative experiences to encourage them to express their voice' **Jennifer Skinner***

*'I have found enhnacement of the learners' engagement and motivation' **Jessica Eagers Hardie***

*I have learned that pupil learning and engagement can be maximised via the use of mobile or computer device in the classroom **Kirsten Douglas***

*'Learner involvement and wellbeing increased when the children were taking part in outdoor activity compared with classroom activity' **Katie Kane***

*'I found that building in opportunities for real-life pursuits and aims helps to improve learners' sense of autonomy with regard to making change' **Lisa MacIntyre***

*'The outdoor spelling practice helped the children think creatively of how to use the words in context' **Louise Ross***

*'The pupils were keen to learn more about global issues and how we can make a difference in our day to day actions' **Mark Fraser***

*'This engaged S5 pupils with learning outside the classroom and in carrying out activities at home' **Sarah Henderson***

