GETTING NATURALLY CONNECTED: Nurturing children’s affinity to Nature

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Devon
England
Europe (for now)

#outdoor learning
University of Plymouth has a long-standing engagement with relevant research, including:

Roger Cutting, ‘Wild Wiltshire’ project, completed Funded by the Wiltshire Wildlife Trust and the Blagrave Trust.

Linda la Velle & Jan Georgeson, PhenoloGIT

Alun Morgan, Service Learning for Sustainability: A feasibility study into the potential for a new learning opportunity at Plymouth
Alun Morgan, Researcher in Residence with Devon Wildlife Trust
Alun Morgan, Sail Training as a vehicle for Social Working; Ocean Literacy
Alun Morgan, application to become a Regional Centre for Expertise in Education for Sustainable Development (RCE)

Rowena Passy, ‘Go Out and Learn’ Erasmus+ Project (UK-Norway-Italy-Belgium)

Sue Waite & Rowena Passy Natural Connections, ESRC International Partnership and Networking Award

Sue Waite, Naturally Healthy Devon Schools
Sue Waite, Exmoor Curriculum and Mosaic
Sue Waite, Moor Health and Wellbeing
Sue Waite, Good from Woods
For further details, please see the new Peninsula Research in Outdoor Learning website: https://www.plymouth.ac.uk/research/peninsula-research-in-outdoor-learning
Our plan for the presentation...

• Why?
• 3 research projects
• 3 key messages
• 3 things to do (an invitation moving forward)
Why connect children and nature?

International survey of expert commentators on OL, (Waite 2017)

• underpinning care and action for others and the environment (63% ‘yes’, 37% ‘to a degree’) **100%**

• encouraging healthy bodies and positive lifestyles (60% ‘yes’ and 38% ‘to a degree’) **98%**

• developing social, confident and connected people (55% ‘yes’ and 38% ‘to a degree’) **98%**

• stimulating self-regulated and creative learners (46% ‘yes’ and 41% ‘to a degree’) **87%**

• supporting effective contributions and collaboration (39% ‘yes’ and 49% ‘to a degree’) **88%**
The NCDP Project Approach

- A large scale, 4 year demonstration project
- Extensive evaluation
- A whole school, sustainable approach to outdoor learning
- Tailored support for schools
- Local, independent brokerage of services
- Local, low cost – within walking distance
Results – impact on school culture

- A statistically significant increase in the time schools spent on outdoor learning, in all terms

- Increase in outdoor learning sustained over time

- Outdoor learning used across the curriculum particularly in core subjects – English, maths and science
Results – impact on pupils

95% - lessons more enjoyable
94% - greater understanding of nature
93% - improves social skills
92% - engages pupils with learning
92% - improves health and wellbeing
85% - positive impact on behaviour
Health and Wellbeing

92% of schools reported a positive impact on pupil health and wellbeing

Attributed to:
• having space to reflect
• escaping the pressure
• being physically active
Character development

93% - improves social skills
92% - engages pupils with learning
85% - positive impact on behaviour

Attributed to developing:
• leadership skills
• positive attitudes towards risk
• greater confidence and self esteem
• motivation to learn
• improved communication
• teamwork skills
• kindness towards others
Enjoyment of Lessons

92% of schools reported a positive impact on pupils’ enjoyment of lessons

Attributed to:
• new experiences
• practical context
• learning in different ways
• opportunity to succeed
Attainment

57% of schools reported a positive impact on pupil attainment

Attributed to:
• improved health and wellbeing
• development of non-cognitive skills
• increased enjoyment
And – positive impacts on teachers

79% - teaching practice
72% - health and wellbeing
69% - job satisfaction
69% - professional development
National Parks educational offerings

• The Exmoor Curriculum
  • Four year curriculum plan, focused on personal and interpersonal development and community participation, extending and enriching national curriculum entitlement.
  • A collaborative long term initiative between Park Rangers and a school set in the NP
  • Children aged 9-13 years spend regular curriculum time in place-based outdoor learning

• MOSAIC – Young Champions for National Parks
  • Developing affinity with nature with young people aged 16-25
  • Champions are trained by rangers to mediate nature experiences for other young people (881 YCs at 459 events)
  • Criteria for taking part included being Not in Employment, Education or Training; limited access to public transport and services; not knowing what career path to follow; being the main carer in the home; needing to improve physical or mental health or suffering from stress.
Exmoor curriculum evaluation – key findings

• Fun and enjoyment
• Very knowledgeable about wildlife and places on Exmoor

• BUT less well established were...
• awareness of the purposes of the National Park Authority
• implications of the local study for wider environmental issues
• preparation for next steps in education.
MOSAIC matters

• “It’s like little bits of everything that has helped”

Young Champion’s comment
(Exmoor National Park)

• Partnership
• Active modelling
• Listening
• Environmental action
• Citizenship
Types of activities organised

Exmoor (111 activities)

Lake District (105)

New Forest (98)

Northumberland (69)

Yorkshire Dales (76)
Personally

- Encouraged acceptance of self and others, improving social confidence through providing a safe space.
- Encouraged attachment and a sense of belonging to place through highlighting both the familiar and the novel, especially through residential gatherings.
- Encouraged attachment to significant others (often the project officer) through personal commitment and interest in the young people and the trust this engendered.
• Supported positive wellbeing and physical health through purposeful activities.
• Supported positive outcomes for individuals at an organisational and personal level through social networks and partnerships.
• Contributed to their connection to nature, according to the young people themselves.
1. My ideal vacation spot would be a remote, wilderness area.
2. I always think about how my actions affect the environment.
3. My connection to nature and the environment is a part of my spirituality.
4. I take notice of wildlife wherever I am.
5. My relationship to nature is an important part of who I am.
6. I feel very connected to all living things and the Earth.

Case study: Change in one YC's ratings of the Nature Relatedness (NR6) scale after involvement in Mosaic

On follow up this YC reports "Feeling more confident about my forestry career as I have now done a placement... it's fun, it's in the forest and there's nice people."

Initial
Follow up
Structurally

• Required time to develop partnerships to support young people and that some young people would benefit from broadening the Champion model to value teamwork and collaboration as well as individualist leadership.

• Addressed issues of social inequity and the invisibility of young people in the National Parks by surfacing barriers to access and addressing gaps in youth service provision.

• Increased employability through growing skills, developing influential networks and building confidence at work or in finding work.

• Motivated increased civic participation through nurturing interest in environmental action and volunteering.

• Enhanced the perception of young people’s capacities by creating higher levels of trust in their abilities within the wider community and various networks.
Mobile and Geographical Information Technologies for Phenological Investigation across European schools: innovation and learning

PI: Linda La Velle
RF: Jan Georgeson

https://www.phenologit.org/
PhenoloGIT designed, built and tested a collaboratively created educational environmental information platform, supported by state-of-the-art mobile technology and Geographical Information Technologies (GIT), for use by teachers and students in primary and secondary schools.
Phenology is the study of the timing of recurring biological events in the animal and plant world, the causes of their timing with regard to biotic and abiotic forces, and the interrelation among phases of the same or different species (Lieth, 1974).

• Phenology is relevant to teaching all life and physical sciences, particularly biology, geology, ecology and geography

• Specific curriculum areas with links to phenology include:
  ➢ impact of seasonal change on biological processes
  ➢ reproduction and life cycles
  ➢ climate change!!
Phenology

Species criteria:
- Common to all countries
- Show seasonal change
- Of interest to children
- Scientific merit
- Taxonomic variety

Final selection:
- Horse chestnut
- Oak
- Bramble
- Daisy
- Red dead-nettle
- Dandelion
- Creeping buttercup

- Garden (cross) spider
- 7 Spot Ladybird
- Common brimstone
- European peacock
- Common frog
- Swallow
How the partnership worked

- All partners produced two exemplar teaching activities, using common template incorporating:
  - Big Idea
  - Curriculum Links
  - Learning Objectives
  - Learning Outcomes
  - Preparation and Equipment
  - Activity

- School project partners produced further activities during pilot

- Open educational resources repository in project website
Key arguments for a Mobile App

- Makes science interesting;
- Can motivate students, including those with additional needs
- Aids collaborative learning
- Includes ‘hands-on’ and ‘minds-on’ activities
- Inquiry-based teaching
- Citizen science
- Cross curricular
URGENT: Urban and regional planning with the young generation - collective and intergenerational learning encouraging sustainability transformations (2019-2023)

Finnish Environment Institute SYKE

URGENT Hub, a team of regionally and nationally influential researchers and practitioners

Collaboration with University of Plymouth, University of Copenhagen and University of Antwerp

Funded by the Academy of Finland
URGENT brings together urban and regional planning and secondary schools to co-create innovative and scalable transformative pathways to more sustainable societies.

+ Social and action-oriented learning for sustainability
+ Developing all participants’ sustainability competencies
+ Connecting schools with the society, a model for collaboration
+ Taking youth perspectives into account in urban and regional planning
+ Ensuring schools’ near environments support students’ holistic learning and wellbeing
SYKE - University of Plymouth collaboration

- UoP will participate in the international advisory board
- A researcher visit to Plymouth in 2020
  - Writing a co-authored review article regarding theoretical development of sustainability education
  - Comparisons regarding sustainability education in Finland and Britain
What does this research say about nurturing affinity to nature? ... Relevance to NANOL project

A) Experiential learning
   1. Early experience is crucial
   2. Continued experience – beyond primary ... and ideally lifelong

• important to develop positive environmental attitudes later in life
• Biophilia (biophobic?)
What does this research say about nurturing affinity to nature? ... Relevance to NANOL project

B)

1. ‘Hands-on’ Learning - Embodied Sensory engagement
2. ‘Minds-on’ learning - Inquiry-based
3. ‘Hearts-on’ learning - Nature Connectedness:
   • Care about not just knowledge
   • Affect
   • Part of nature

Johann Heinrich Pestalozzi
Born: 1746
Died: 1827
| Outdoor & Adventurous | ‘Scientific’/Environmental Fieldwork | Nature Connection |
C) Collaboration

1. Peer learning
   1. Learners
   2. Educators/facilitators/practitioners
2. Infrastructure – nature parks and schools working together
3. Interdisciplinary – science-arts-humanities

What does this research say about nurturing affinity to nature? ... Relevance to NANOL project
What can we do next? ... an invitation ... to discuss with a partner and share through Padlet (https://bit.ly/2XtS7FB)
Thank you Kiitos