European Network for Environmental Citizenship (CA16229) 2nd Virtual Training School

Workshop 2:

Case studies from research for engaging people in education for environmental citizenship: opportunities and challenges

Marcus Grace

Southampton Education School

2 cases (later on):

– School students
– Adult volunteers

We didn't set out explicitly to engage people in environmental citizenship, but to engage with nature and become 'nature literate'.

My rationale: nature/wildlife is a part of environment!

Nature literacy:

the ability to engage with nature, both cognitively and emotionally, and feel empowered to take some form of positive action to benefit nature

So what do we mean by 'engaging with nature'?

What is nature?

What is engagement?

What is 'nature'/ 'natural environment'?

"…open or green spaces in and around towns and cities, the coast and the countryside'.

(Natural England, 2019, p3)

What is 'engagement'?

Employee engagement = organisational effectiveness
It can be attitudinal and/or behavioural (Macey & Schneider, 2008)

Involvement, Enthusiasm, Passion (Erickson, 2005)
Commitment, Loyalty, Productivity, Ownership (Wellins and Concelman, 2005)

Active engagement:
''high levels of activity, initiative, and responsibility''
(Dvir et al, 2002, p737)

Why engage with nature?

Positive relationships with nature lead to pro-environmental behaviours and emotional wellbeing
(e.g. McMahan & Estes, 2015)

Composting food waste

Joining an environmental organisation

Putting up nestboxes for birds

Buying energy efficient products

The benefits can be personal or societal

Using more efficient vehicles

Buying insect-friendly plants

Stopping using pesticides

Mowing your lawn less

Engage with nature/environment

Connect with nature/environment

We connect with the environment in two ways:

Emotionally and Cognitively

Emotional connection

Measuring emotional connection with nature

Connection with Nature Scale (Mayer & Frantz, 2004)
Engagement with Beauty Scale (Diessner et al, 2008)

Nature Connection Index (NCI)
                    (Natural England, 2017; Cheng & Monroe, 2010)

Nature Connection Index (NCI)
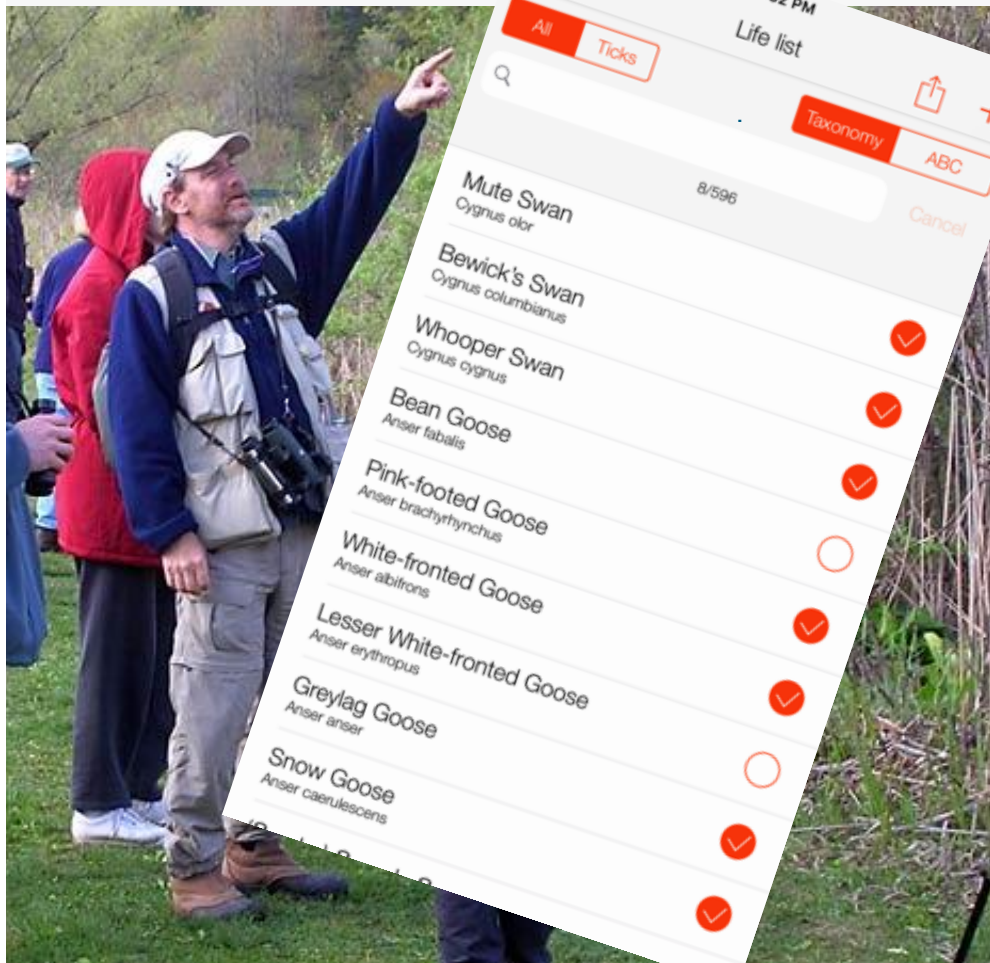
It has 6 questions:
- I always find beauty in nature
- I always treat nature with respect
- Being in nature makes me very happy
- Spending time in nature is very important to me
- I find being in nature really amazing
- I feel part of nature

People respond on a 7-point scale.
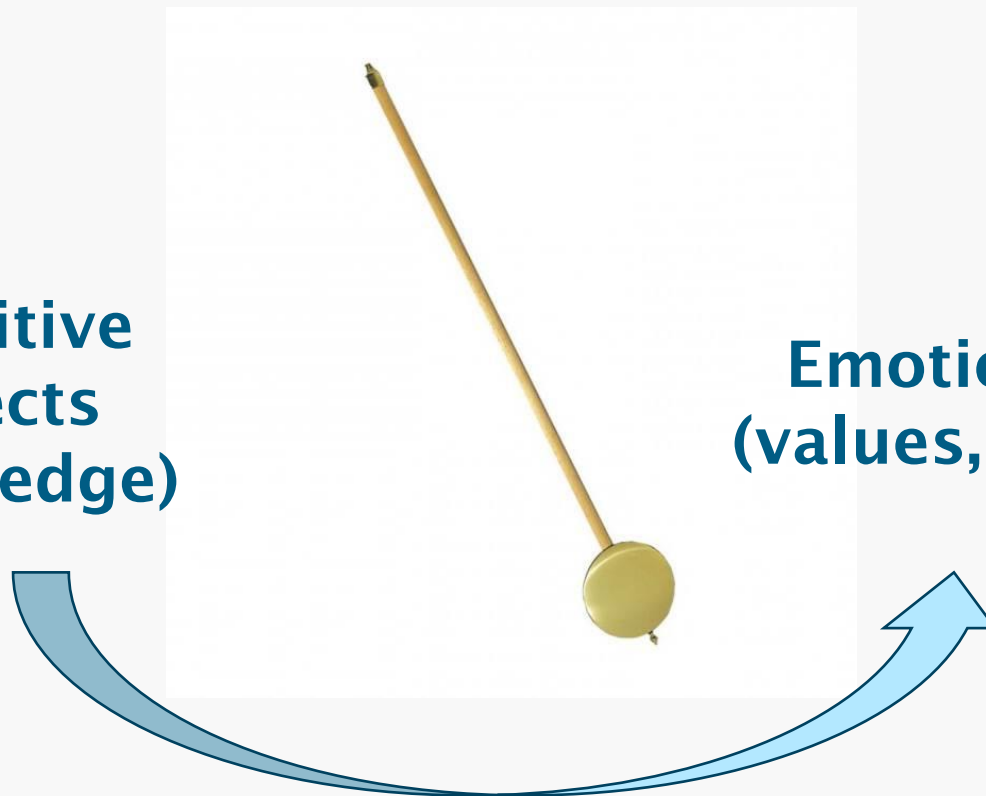
1 (strongly disagree) ⟷ 7 (strongly agree)

Cognitive connection

< Lists

All   Ticks

Life list

Taxonomy   ABC

8/596   Cancel

Mute Swan
Cygnus olor

Bewick's Swan
Cygnus columbianus

Whooper Swan
Cygnus cygnus

Bean Goose
Anser fabalis

Pink-footed Goose
Anser brachyrhynchus

White-fronted Goose
Anser albifrons

Lesser White-fronted Goose
Anser erythropus

Greylag Goose
Anser anser

Snow Goose
Anser caerulescens

emotional v cognitive

Cognitive aspects (knowledge)

Emotional aspects (values, feelings, etc.)

Emotional v cognitive connection with environment

(Editorial of magazine from a very big UK environmental organisation in 2019, talking about the wonder of geese arriving here on autumn migration]

"…don't try and identify your distant goose. Start by wondering where she has come from, how many young are with her, and what changes she has seen on her travels."
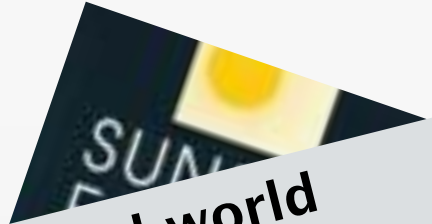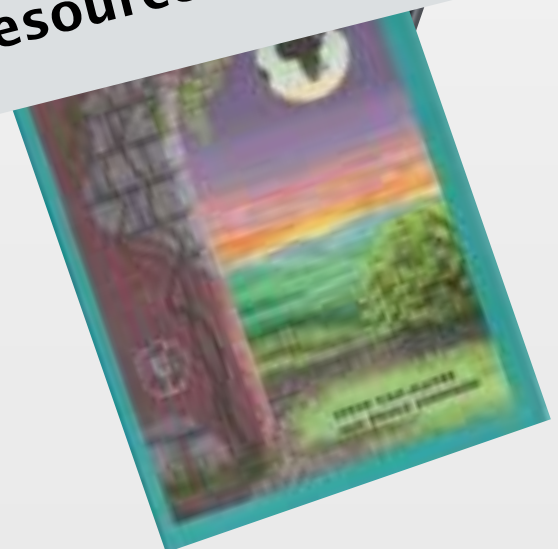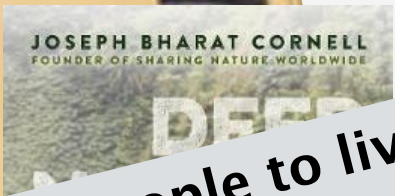
Southampton approach: blending emotional and cognitive connection

Earth Education

Helping people to live more harmoniously with the natural world by…

- Understanding how ecosystems work
- Developing a long-lasting love and respect for the Earth and its life-forms
- Reducing their own impact on its natural resources

EARTH EDUCATION
a new beginning

JOSEPH BHARAT CORNELL
FOUNDER OF SHARING NATURE WORLDWIDE

DEEP

JOSEPH CORNELL
Author of
SHARING NATURE
WITH CHILDREN

Something to consider…

What's the relative importance of cognitive and emotional aspects of Environmental Citizenship?

Engagement with nature/environment!

= taking action and responsibility for the environment

Case study1
school students (11-14 year olds)

Our pre-service teachers and secondary school students

Why isn't school science engaging students with nature?

Read our paper!!!

Why isn't school science engaging students with nature?

Two main reasons:

1. Teachers' <u>lack of knowledge</u> about nature and <u>lack of confidence</u> to teach fieldwork (e.g. ASE 2011; O'Donnell, Morris and Wilson, 2006; Scott et al., 2015)

2. The <u>lack of emphasis on</u> **nature** and **values** in the school science curriculum

Nature literacy pedagogical tool kit

UNIVERSITY OF
Southampton
School of Education

Biodiversity walk
(pre-service teachers ➡ students)

Focusing on combining: knowledge & values
(cognition and emotion)

23

Pedagogical tool kit:

A constructivist teaching approach…
Start where they're at!!!

Relevant to their own lives, experiences, knowledge and values

Developing students' confidence to explore nature first-hand.

Conversation about how safe the forest actually is.

Curiosity questions

Students' create their own questions which are meaningful/relevant to their own everyday interests.

- *How can we stop the deer eating all the flowers?*

- *What damage do cats and dogs do to the biodiversity?*

- *How can I encourage more nature to my garden?*

- *Is it better to look after the biodiversity or grow the trees and sell the wood?*

Pedagogical tool kit:

Authentic stories
e.g. bluebells

Detective's eye

Pedagogical tool kit:

Detective's eye

Pedagogical tool kit:

Making a pledge ('Next steps with nature')

What I am going to do for nature or in nature:

"Make a hedgehog home"
"I'll come back [here] with my [family]"
"Make a nature sound map in [the nearby] park"

Taking Action

The programme should include action-oriented activities:

e.g.

- ✓ **making something** (a wildlife area at school, a poster encouraging people to protect hedgehogs)
- ✓ **writing to a local politician – and sending it!**
- ✓ **generating a petition**
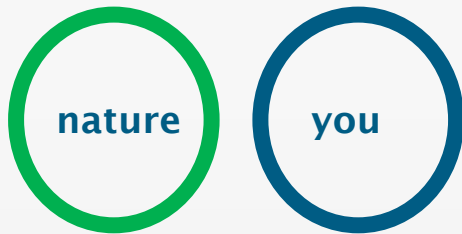- ✓ **providing public information** (e.g. Youtube clips).
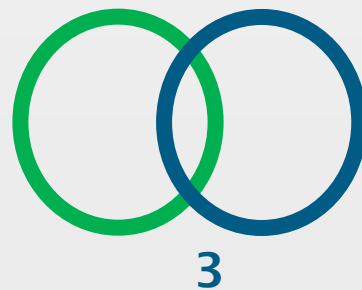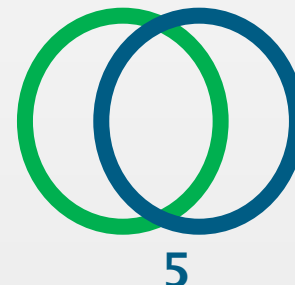
Taking Action
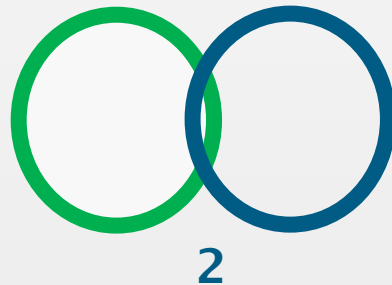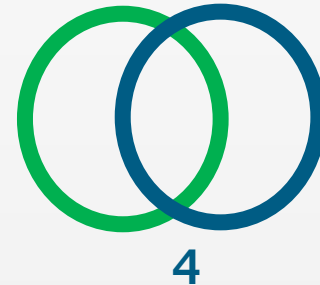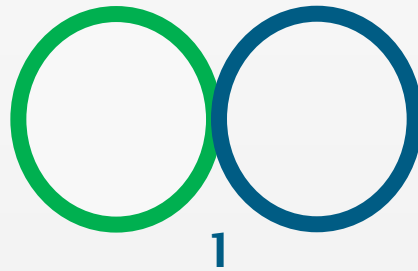
Assessment...

- Following up on their pledges

- Usual school subject knowledge tests

- Written work: **"<u>Why</u> is nature important?"**

- Schultz's connection with nature circles

Measuring engagement with nature

"Please circle the picture that best describes how close you feel to nature."

(Schultz, 2001, p331)

Something to consider…

Is this an environmental citizenship project?

What components of environmental citizenship are missing?

How can they be included?

Case study 2

National Trust

The Wonder of Nature

OUR TASK:

How can we engage visitors with nature?

= How can we engage visitors with the environment?

= How can we develop environmental citizens?

The Wonder of Nature

Outdoor visitors join guided walks

20 outdoor guides

- volunteers
- mostly over 60 years old
- not trained teachers

The Wonder of Nature

How would you help the visitors to engage with nature? (and become environmental citizens)

*The
Wonder
of
Nature*

What are the visitors interested in?

Visitor questionnaires (N=76)
Reasons for joining the walks

Cognitive aspects (69/76):
(e.g. general information and knowledge; trees, bats; dragonflies; wetland management; fish habits and management; butterflies, buildings, natural springs…)

Emotional aspects (43/76):
(e.g. being in nature; enjoyment; 'bringing things to life'; human interaction; hearing personal stories…)

The *Wonder of Nature* project
Pedagogical approaches

- **The same pedagogical tool kit**

- **Self-determination theory**

(Ryan & Deci, 2002)

i) building confidence/self-efficacy
ii) enabling an autonomous approach
iii) building a feeling of belonging to a community
of shared interest

The *Wonder of Nature*
overview

Training outdoor guides

Walks and talks using **self-determination theory
& pedagogical toolkit**

Community of Interest (Wenger, 1998)   (face-to-face meetings and online **Facebook**)

Independent & group **research** (e.g. internet searches, self-guided walks, citizen science, etc.)

School project

Multidisciplinary?

Interdisciplinary?

Transdisciplinary?

Disciplinary boundaries

School project

✔✔✔ **Multidisciplinary?**

✔ **Interdisciplinary?**

Transdisciplinary?

Adult project

Multidisciplinary?

✔ **Interdisciplinary?**

✔✔✔ **Transdisciplinary?**

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47