

Conceptual profiles in outdoor education

Mikael Lönn, Patrik Dinnétz, Tomas Bollner, Mona Petersson

Södertörn University, Sweden

södertörns
högskola

UNIVERSITY COLLEGE



New Perspectives
in Science
Education

International Conference
**NEW PERSPECTIVES
in SCIENCE EDUCATION**



A day at the lake



Learning outcomes

Swedish curriculum for elementary school - pupils aged 10-13

Several learning outcomes connected to sustainable development

“People’s dependence on, and the impact on nature, and what this means for sustainable development”

“Nature as a resource for recreation and experiences and what responsibilities we have when using it”

The study

Botkyrka municipality south of Stockholm in Sweden

All children in fifth-grade is going on a mandatory field trip visiting a lake.

A questionnaire which was answered by 185 pupils first on the way to the lake, and then again on the way back from the lake.

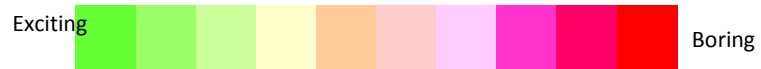
Fältbussen = the
field/out-door
bus



Is nature important to us humans?



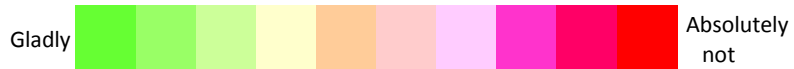
How do you find nature?



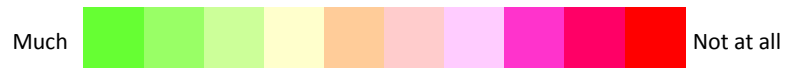
Could it be dangerous to be in the nature?



Would spend spare time in nature?



Do you like out-door education?



Who is food for whom?

Rita pilar mellan bilderna så att de beskriver vem som äter vad i naturen. OBS en bild kan ha flera pilar till eller från sig!

Exempel

Mean values and change

Question	Mean answer, SE, min and max values	Mean change, SE, min and max values
Is nature important for us humans?	1.67 (0.14, 1, 10)	- 0.02 (0.11, -7, 2)
Is nature interesting/boring?	3.92 (0.25, 1, 10)	0.06 (0.16, -7, 4)
Is nature dangerous?	4.80 (0.20, 1, 9)	0.26 (0.18, -8, 5)
Would you spend spare time in nature?	5.01 (0.31, 1, 10)	0.20 (0.15, -4, 4)
Do you like outdoor education?	4.06 (0.30, 1, 10)	0.08 (0.19, -7, 5)

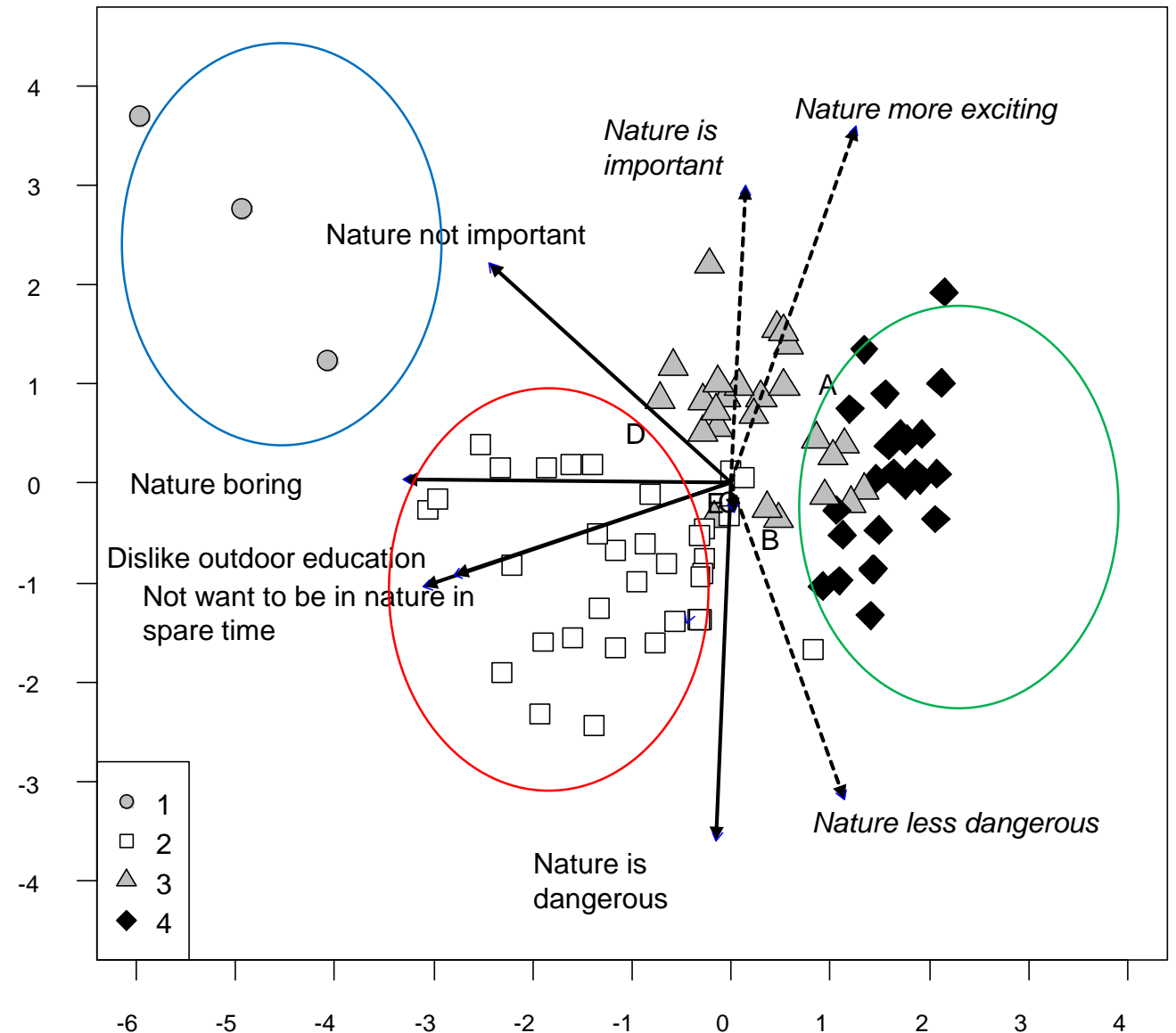
Small mean changes but large variation between pupils

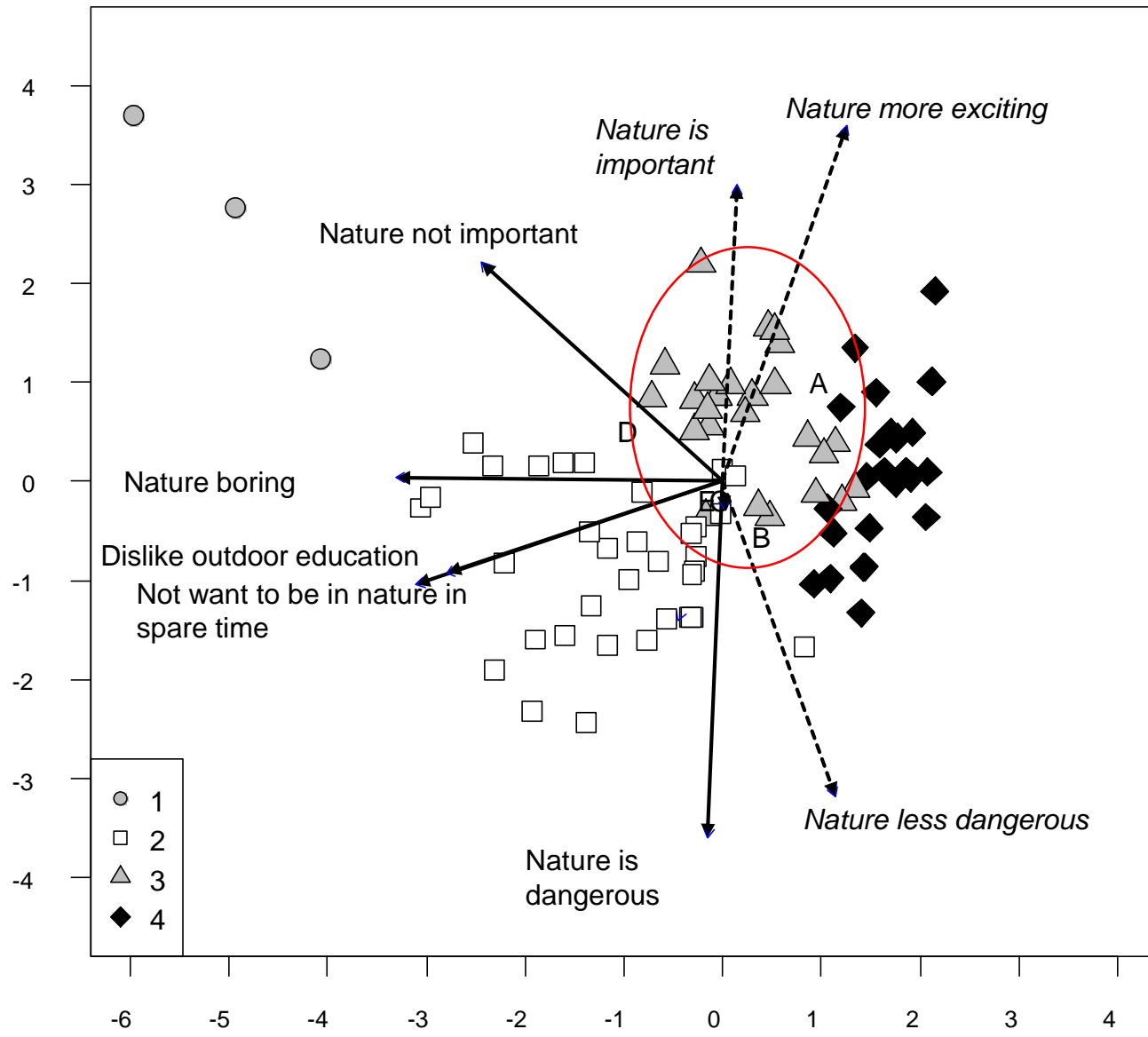
Profiles and change

Filled arrows – scores before the event, the data that is base for the ordination.

Dashed arrows – change in attitude during the day.

Symbols – the groups identified in the cluster analysis





Individual change

Change Towards Before	Important	Exciting	Not dangerous	Want to spend time in nature	Like outdoor education
Nature not important	+ **	N.S.	N.S.	N.S.	N.S.
Nature boring	- **	+ ***	N.S.	- ***	- ***
Nature dangerous	- ***	N.S.	+ ***	N.S.	N.S.
Do not want to spend time in nature	N.S.	- *	N.S.	+ ***	N.S.
Dislike outdoor education	N.S.	N.S.	N.S.	N.S.	+ ***

Conclusion

The conceptual profiles predict the outcome of outdoor learning events –

One group who likes and care for nature – before and after but do not really change.

One group without expectations but no fear – they change and learn a lot.

One group who dislikes nature – and maybe even more after close encounter

The last group is in most need of improvement, nature is boring, dangerous and most of all they do not want to be there. They do not care if it is important to us humans, the main learning outcome, and change during the day is in some cases in an even more negative direction.

Pre-preparation? Well-being focus in the field?...?

Thanks to the Fältbussen staff – Annika Norin and Anders Bengtsson for diskussions and practical help.