Impact of Outdoor Learning in the UK

Protocol for a systematic map of existing evidence

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PROTOCOL

The authors are part of the EPPI-Centre, UCL Institute of Education, University College London; and Giving Evidence.

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Contents

1. Background

Outdoor Learning spans a multitude of activities designed for different purposes with different groups of people. Its growth reflects widely held appreciation of the outdoors and expectations that it is beneficial for learning, development and therapy. What is known from research about outdoor learning has been collated in reviews of existing literature in the areas of: children's experiences with nature;[1] creative learning environments, including outside the classroom;[2] school and university students learning outside the classroom;[3] physical activity;[4] and forest schools.[5] These reviews found relatively few rigorous evaluations of impact; they do not cover the whole of outdoor learning and are unlikely to have captured much of the unpublished evaluations conducted by outdoor learning organisations for their own use.

The Blagrave Trust and the Institute for Outdoor Learning have recognised this lack of consolidated evidence to attest to the claims made for the effectiveness of outdoor learning and commissioned this project.

2. Aims

The aim of the Blagrave Trust and the Institute for Outdoor Learning was to commission work that provides:

1. An overview of the different options available to those considering using outdoor learning to meet an educational, developmental or therapeutic need for children and young people in order to support a more coherent sense of the outdoor learning sector as a whole and the different outcomes that it seeks to achieve;
2. Improved understanding of existing research and evidence based practice in the UK.

3. Research questions

We translated these aims into the following research questions:

1. What is the nature of the existing research that addresses outdoor learning that aims to meet children and young people's educational, developmental or therapeutic needs?
2. To what extent does the existing research match current practice in the UK?

4. Methods

4.1 Involving the outdoor learning sector

The Blagrave Trust and The Outdoor Learning Institute have convened an Advisory Group for this review with members from across the outdoor learning sector. An initial meeting of this group will discuss the scope of the review, the key issues to be considered when reviewing studies, and where relevant studies might be found. A second meeting will discuss the findings emerging from the analysis and the implications for the outdoor learning sector. A third meeting will refine the draft report prior to publication.

4.2 Eligible studies

This work will build on an earlier systematic review in which outdoor learning was defined as 'learning that accrues or is derived from activities undertaken in outdoor locations beyond the school classroom'.[3] The definition will be applied broadly to include learning that is accrued from either systematic teaching, or from enlightening experiences.

We shall include studies in this review that include:
- children and young people, aged 5 – 25 who are participants or volunteer helpers;
- outdoor learning in the education sector, or the health sector; and
- assessments of educational attainment, other learning or development,

Such studies must be:
- systematic reviews of outdoor learning research or
- primary studies including any of the following designs:
    - Detailed descriptions
    - Before and after studies
    - Controlled trials
    - Reporting the delivery or receipt of programmes
    - Surveys of practice
    - Methods studies, particularly of outcome measures
- published 2003 or later

Primary studies will be limited to children and young people normally living in the UK (including studies addressing foreign trips or sailing trips).

4.3 Identifying studies

We shall seek studies through two routes: searching bibliographic databases that record predominantly academic studies; and crowdsourcing studies from organisations active in the sector.

The first route involves choosing key words likely to describe relevant studies and combining them in a string to search databases electronically. Two sets of key words will describe (a) children and young people; and (b) outdoor learning. By combining the key words they will identify studies that address outdoor learning with children and young people. We shall search databases that compile research in the areas of education, psychology and other social sciences. More details are in Appendix 1.

The second route involves circulating a request for studies through outdoor learning networks across the UK.

Studies will be checked against the inclusion criteria. Initially, two researchers will check studies and compare their decisions. They will discuss any discrepancies and, if necessary, amend the criteria or definitions of terms. Once they agree on 95% of the studies, they will continue independently. If they are uncertain about any studies they will discuss them before making a final decision.

Records of studies will be managed with software designed for systematic reviewing to maximize efficiency and accuracy when identifying and analyzing studies.[6]

4.4 Describing studies

Studies included in the review will be described in the following terms.

Populations:

- **Children and young people**, age 5-25. This includes the general population as well as specific groups such as those: disengaged from learning; not in education, employment or training; volunteer helpers with outdoor learning programmes; with physical or intellectual disabilities; with experience of trauma; or with other special needs.
- **Parents, families, carers, teachers, group leaders or other adults** in the lives of these children and young people.

Interventions:

- **In the education sector,** such as: field studies; expeditions; one-off adventure activities; frequent adventure activities (e.g., scouts, guides, ramblers); nature visits; forest/beach schools; bushcraft; outdoor nursery; other outdoor learner-centred activities.
- **In the health sector, therapy** such as: prescribed outdoor activity; group/family adventure based therapy; one-to-one therapy outdoors; other outdoor therapy.

Primary outcomes:

- **Educational attainment,** such as: school assessments (e.g., key stages 1-5/ AS/A level); further education; national or vocational qualifications; undergraduate degree; post graduate degree; other educational attainment.
- **Other learning and development**, such as: curiosity; relationship with nature; self-awareness; self-responsibility; communication or teamwork; health and well-being; healthy lifestyles; employability; youth leadership; community integration; community leadership; or other learning and development.

Secondary outcomes, only considered in the presence of primary outcomes:

- **Health,** such as: healthy behaviour; health (physical or mental); rehabilitation.

Appendix 2 includes a coding scheme to describe the studies consistently.

4.5 Appraising the quality of studies

Some outdoor learning research has already been described and quality assessed systematically. We shall summarise such systematic reviews in terms of their scope and quality, the focus of their included studies, and the findings or conclusions reported by the authors. Appendix 3 includes a coding scheme to summarise systematic reviews consistently.

Other included studies will be described in terms of their ability to add to our knowledge of the impact of outdoor learning. We shall distinguish the following designs:

- Surveys of UK practice;

- Descriptions of interventions: with clear goals, logic models, feasibility or acceptability data;

- Evaluations of interventions: before and after studies; controlled trials.

Appendix 4 includes a coding scheme to describe evaluations of interventions. It distinguishes studies in terms of the *Project Oracle* standards of evidence: project model (and evaluation plans); indication of impact; and evidence of impact.[7] The detail in which studies will be described will depend upon the number included in the final analysis.

4.6 Analysing the body of literature

Once studies have been described, the full set will be analysed to show the types of research that have addressed the types of outdoor learning, and where such research has been replicated in similar or different settings. The results will be presented in tables to show the balance of research effort in the outdoor learning sector.

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Appendices

Appendix 1: Search strategy for bibliographic databases

We shall search the following databases:

1. Education Resources Information Centre (ERIC) http://eric.ed.gov/
2. British Education Index (BEI) https://www.ebscohost.com/academic/the-british-education-index
3. AEI
4. Applied Social Science Index and Abstracts (ASSIA)
5. PsychInfo http://www.apa.org/pubs/databases/psycinfo/
6. Child and Adolescent development studies

A draft search strategy for ERIC is shown below. This will be adapted for the other databases.

Database and platform	String	Hits
ERIC, AEI ASSIA via proquest	((((SU.EXACT("Outdoor Education") OR SU.EXACT("Adventure Education") OR SU.EXACT("Field Trips") OR SU.EXACT("Museums") OR su((adventurebased therapy OR adventurebased counselling)) OR su((adventure therapy OR adventure counselling))) OR (ti((adventure counseling OR adventure based counseling)) OR ab((adventure counseling OR adventure based counselling)) OR ti((adventure therapy OR adventure based therapy)) OR ab((adventure therapy OR adventure based therapy)))) OR (ti(("outdoor education" OR outdoor learning)) OR ab(("outdoor education" OR outdoor learning)) OR ti(("field trips" OR "field studies")) OR ab(("field trips" OR "field studies")) OR ti((adventure education OR adventure-based learning)) OR ab((adventure education OR adventure-based learning)) OR ti(("adventure learning" OR "outward bound")) OR ab(("adventure learning" OR "outward bound")))) AND ((su("Children" OR "adolescents" OR "Young Children") OR su(("Young Adults" OR "Out of School Youth")) OR su(("Disadvantaged Youth" OR "Special Needs Students")) OR su(("College Students" OR "Low Ability Students")) OR su(("Middle School Students" OR "Elementary School Students")) OR su(("Junior High School Students" OR "at risk students")) OR su(("Secondary School Students" OR "High School Students")) OR su(("Minority Group Students" OR "Dropouts")) OR su(("Parents" OR "Teachers")) OR su(("Youth Leaders" OR "School Counselors" OR "Mentors"))) OR (ti((child* OR "young person")) OR ab((child* OR "young person")) OR ti(("young people" OR "young woman")) OR ab(("young people" OR "young woman"))) OR (ti(("young men" OR "young man")) OR ab(("young men" OR "young man"))) OR (ti("young women") OR ab("young women")) OR (ti((girl* OR boy*)) OR ab((girl* OR boy*)) OR ti((adolescen* OR teen*)) OR ab((adolescen* OR teen*)) OR ti(("school child*" OR "school student*")) OR ab(("school child*" OR "school student*")) OR ti(dropouts) OR ab(droputs)) OR (ti((parent* OR famil*)) OR ab((parent* OR famil*)) OR ti((carers OR teacher*)) OR ab((carers OR teacher*)) OR ti(("youth	2422 ERIC (1949) Australian Education Index (376) Applied Social Sciences Index and Abstracts (ASSIA) (101)

	worker*" OR "youth leader*")) OR ab(("youth worker*" OR "youth leader*")) OR ti((Mentor* OR "youth counselor*")) OR ab((Mentor* OR "youth counselor*"))) OR (ti((Therapist N2 youth OR Therapist N2 child*)) OR ab((Therapist N2 youth OR Therapist N2 child*)) OR ti((Therapist N2 Student* OR Counselor n2 youth)) OR ab((Therapist N2 Student* OR Counselor n2 youth)) OR ti((Counselor N2 child* OR Counselor N2 student*)) OR ab((Counselor N2 child* OR Counselor N2 student*))))	
BEI; Child Development & Adolescent Studies via EBSCHO-host	(((((DE "ADVENTURE education") OR (DE "OUTDOOR education")) OR (DE "FIELD days (Education)")) OR (DE "SCHOOL field trips")) OR (ti((adventure counseling OR adventure based counseling)) OR ab((adventure counseling OR adventure based counselling)) OR ti((adventure therapy OR adventure based therapy)) OR ab((adventure therapy OR adventure based therapy)))) OR (ti(("outdoor education" OR outdoor learning)) OR ab(("outdoor education" OR outdoor learning)) OR ti(("field trips" OR "field studies")) OR ab(("field trips" OR "field studies")) OR ti((adventure education OR adventure-based learning)) OR ab((adventure education OR adventure-based learning)) OR ti(("adventure learning" OR "outward bound")) OR ab(("adventure learning" OR "outward bound")))) AND (DE "SCHOOL children")) OR (DE "STUDENTS")) OR (DE "YOUNG adults" OR DE "YOUTH")) OR (DE "TEACHERS")) OR (DE "CHILDREN with social disabilities -- Education" OR DE "AT-risk students") OR (ti((child* OR "young person")) OR ab((child* OR "young person")) OR ti(("young people" OR "young woman")) OR ab(("young people" OR "young woman"))) OR (ti(("young men" OR "young man")) OR ab(("young men" OR "young man"))) OR (ti("young women") OR ab("young women")) OR (ti((girl* OR boy*)) OR ab((girl* OR boy*)) OR ti((adolescen* OR teen*)) OR ab((adolescen* OR teen*)) OR ti(("school child*" OR "school student*")) OR ab(("school child*" OR "school student*")) OR ti(dropouts) OR ab(droputs)) OR (ti((parent* OR famil*)) OR ab((parent* OR famil*)) OR ti((carers OR teacher*)) OR ab((carers OR teacher*)) OR ti(("youth worker*" OR "youth leader*")) OR ab(("youth worker*" OR "youth leader*")) OR ti((Mentor* OR "youth	282

	counselor*")) OR ab((Mentor* OR "youth counselor*"))) OR (ti((Therapist N2 youth OR Therapist N2 child*)) OR ab((Therapist N2 youth OR Therapist N2 child*)) OR ti((Therapist N2 Student* OR Counselor n2 youth)) OR ab((Therapist N2 Student* OR Counselor n2 youth)) OR ti((Counselor N2 child* OR Counselor N2 student*)) OR ab((Counselor N2 child* OR Counselor N2 student*))))	
PSYCHInfo via Ovid	exp Wilderness Experience/ or exp Adventure Therapy or exp Educational Field Trips or "outdoor education".ti. or "outdoor education".ab. or "outdoor learning".ti. or "outdoor learning".ab. or "adventure education".ti. or "adventure education".ab. or "adventure-based education".ti. or "adventure-based education".ab. or "outward bound".ti. or "outward bound".ab. or "field trips".ti. or "field trips".ab. or "field studies".ti. or "field studies".ab. or "adventure therapy".ti. or "adventure therapy".ab. or "adventure-based therapy".ti. or "adventure-based therapy".ab. or "adventure counselling".ti. or "adventure counselling".ab. or "adventure-based counselling".ti. or "adventure-based counselling".ab. AND exp College Students or exp High School Students or exp Junior High School Students or exp Students or exp Elementary School Students or exp Middle School Students or exp Teachers or counsellors or psychotherapists or child*.ti or "young person" .ti. or child*.ab. or "young person".ab. or "young people".ti. or "young woman".ti. or "young people".ab. or "young woman".ab. "young men".ti. or "young man".ti. or "young men".ab. "young man".ab. or "young women".ti. or "young women".ab. or girl*.ti. or boy*.ti. girl*.ab. or boy*.ab. or adolescen* .ti. or teen*.ti. or adolescen*.ab. or teen*.ab. or "school child*".ti. or "school student*".ti. or "school child*".ab. or "school student*".ab. or dropouts.ti. or droputs.ab. or parent*.ti. or famil*.ti. or	1391

	parent*.ab. or famil*.ab. or carers.ti. or teacher*.ti. or carers.ab. or teacher*.ab. or "youth worker*".ti. or "youth leader*".ti. or "youth worker*".ab. or "youth leader*".ab. or mentor*.ti. or "youth counselor*".ti. or mentor*.ab. or "youth counselor*".ab or Therapist N2 youth.ti. or Therapist N2 child*.ti. or Therapist N2 youth.ab. or Therapist N2 child* .ab. or Therapist N2 Student*.ti. or Counselor n2 youth.ti. or Counselor n2 youth.ab. or Counselor N2 child*.ti. or Counselor N2 student*.ti. or Counselor N2 child*.ab. or Counselor N2 student*.ab.	

Appendix 2: Initial coding tool to describe studies

Questions	Answers	Definitions/ notes/ examples
Section A: Core keywords		
A.1 Name of reviewer	A.1.1 Details (specify)	
A.2 Linked reports	A.2.1 None / not known	
	A.2.2 Linked (specify)	
	A.2.3 Unclear (specify)	
A.3 Language of main report	A.3.1 English	
	A.3.2 Other (specify)	
Section B: Study characteristics		
B.1 Form of publication	B.1.1 Journal article	
	B.1.2 Technical report (specify)	
	B.1.3 Dissertation/thesis (specify)	
	B.1.4 Other (specify)	
B.2 Year of publication	B.2.1 Before 2001	
	B.2.2 2001-2005	
	B.2.3 2006-2010	
	B.2.4 2011-2015	

Questions	Answers	Definitions/ notes/ examples
B.3 Broad aims of the study	B.3.1 Not stated	
	B.3.2 Explicitly stated (specify)	
	B.3.3 Implicit (specify)	
	B.3.4 Unclear (specify)	
B.4 Study funding	B.4.1 Not stated	
	B.4.2 Programme provider (specify)	
	B.4.3 Programme funder (specify)	
	B.4.4 Other (specify)	
	B.4.5 Unclear (specify)	
Section C: Study population		
C.1 Age of children	C.1.1 Children: 5-10	
	C.1.2 Children: 11-14	
	C.1.3 Young people: 15-18	
	C.1.4 Young people: 18+	
	C.1.5 Other	
	C.1.6 Unclear	

Questions	Answers	Definitions/ notes/ examples
C.2 Other characteristics	C.2.1 NEETS	
	C.2.2 Non-engaged learners	
	C.2.3 Physical/ intellectual disabilities	
	C.2.4 Post trauma	
	C.2.5 Other special needs (specify)	
	C.2.6 General population	
	C.2.7 Other (specify)	
	C.2.8 Unclear (specify)	
C.3 Who else is involved?	C.3.1 Parents	
	C.3.2 Family (specify)	
	C.3.3 School teachers	
	C.3.4 Other adults (specify)	
	C.3.5 Unclear (specify)	

Questions	Answers	Definitions/ notes/ examples
Section D: Outcomes		
D.1 Educational attainment	D.1.1 Key Stage 1	
	D.1.2 Key Stage 2	
	D.1.3 Key Stage 3	
	D.1.4 Key Stage 4/ GCSEs	
	D.1.5 Key Stage 5/ AS, A level	
	D.1.6 Further Education (HNC/HND)	
	D 1.7 BTECs, OCR Nationals and other vocational qualifications	
	D 1.8 Undergraduate Degree (BA, BSc)	
	D 1.9 Postgraduate Degree (MA, MSc)	
	D.1.10 Other	
	D.1.11 Unclear	
D.2 Educational sphere	D.2.1 Geography	
	D.2.2 Science	
	D.2.3 Maths	

Questions	Answers	Definitions/ notes/ examples
	D.2.4 PE	
	D.2.5 PSHE	
	D.2.6 Environmental sustainability	
	D.2.7 Other (specify)	
	D.2.8 Unclear	
D.3 Other learning and development	D.3.1 Curiosity	
	D.3.2 Relationship with nature	
	D.3.3 Self awareness	
	D.3.4 Self responsibility	
	D.3.5 Communication or teamwork	
	D.3.6 Health & well being	
	D.3.7 Healthy lifestyles	
	D.3.8 Employability	
	D.3.9 Youth leadership	
	D.3.10 Community integration	

Questions	Answers	Definitions/ notes/ examples
	D.3.11 Community leadership	
	D.3.12 Other (specify)	
	D.3.13 Unclear (specify)	
Section E: Practice/ Discipline/ Activity		
E.1 Formal name	E.1.1 Not applicable (no formal name)	
	E.1.2 Details (specify)	
	E.1.3 Unclear (specify)	
E.2 Setting	E.2.1 School grounds	
	E.2.2 Residential facility	
	E.2.3 Local community	
	E.2.4 Other (specify)	
	E.2.5 Unclear	
E.3 Education	E.3.1 Field studies	
	E.3.2 Expedition(s)	

Questions	Answers	Definitions/ notes/ examples
	E.3.3 Adventurous activity	
	E.3.4 Frequent adventurous activity (e.g. scouts, ramblers)	
	E.3.5 Nature visits	
	E.3.6 Beach schools	
	E.3.7 Bushcraft	
	E.3.8 Other outdoor learner centred	
	E.3.9 Unclear	
E.5 Therapy	E.5.1 Prescribed outdoor activity	
	E.5.2 Group/ family adventure based	
	E.5.3 One-to-one therapy outdoors	
	E.5.4 Other therapy (specify)	
	E.5.5 Unclear	

Appendix 3: Describing systematic reviews

This tool is a **draft** developed to help summarise a systematic review for inclusion in a rapid map of Outdoor Learning research. A systematic review is a review of the research literature using systematic and explicit accountable methods. It can be recognised as a review which:

- Has a clear question with explicit or implicit inclusion criteria
- Has a systematic search including at least two databases
- Takes into account the relevance and quality of studies included in the review

Questions	Answers	
Section A: Bibliographic details		
A.1 Citation		
A.2 URL		
Section B: Quality of review	✓	
B.1 Review meets recognised standards		B.1.1 Published in *Cochrane Database of Systematic Reviews* on *The Cochrane Library*
		B.1.2 Published on *The Campbell Library*

Questions	Answers
	B.1.3 Published by other recognised organisation producing systematic review (give details)
	B.1.4 Reports using *The Cochrane Handbook*
	B.1.5 AMSTAR score (reported for reviews in www.healthsystemsevidence.org
	B.1.6 Recognised as reliable in Evidence-informed guidelines (eg by SIGN, NICE) (give details)
	B.1.7 Clear inclusion criteria; searches at least two relevant databases; appraises quality of included studies.
	B.1.8 other (give details)
B.2 Review up to date (date of last search listed for reviews on www.healthsystemsevidence.org)	B.2.1 Date of last search
	B.2.2 Date published

Questions		Answers
B.3 Number of included studies		
B.4 Quality of included studies		B.4.1 Authors comment on quality of studies
B.5 Reliability of effectiveness conclusions		B.5.1 Conclusions of effectiveness based on statistical meta-analysis
		B.5.2 Conclusions of effectiveness not based on statistical meta-analysis
Section C: Relevance of review		
C.1 Review addresses the question		C.1.1 Review addresses the whole question
		C.1.2 Review addresses part of the question:
		C.1.3 Review addresses a sub-question:

	C1.4 Other
C.2 Context of included studies	C2.1 List countries of included studies (reported for reviews in www.healthsystemsevidence.org)
	C2.2 Studies conducted in context/countries similar to Scotland

		C2.2 Studies conducted in context/countries with important differences that might influence answers to Evidence Summary questions (give details)

Section D: Findings of review

		D.1.1 Match definitions of key concepts for Evidence Summary
D.1 Key concepts in review and/or included studies		D.1.2 Differ from definitions of key concepts for Evidence Summary (give details)

	D.2.1 List findings as bullet points
D.2 Summary of findings Hint – look for summary sentences in the review in: • The plain language summary • The abstract • The first paragraph of the discussion – this often summarises the findings • The end of the discussion – this often makes the conclusions (Do not take sentences from press releases which may put a 'spin' on the findings)	
	D.2.2 Write overview of findings in 1-2 sentences

Appendix 4: Describing primary research

This tool is a **draft** tool developed to describe studies in terms recognised by the ORACLE project.

Section E: Level of Evidence – Standard 1			
E1 Is there a clear aim?	E.1.1 (specify)	Stated	- *Can you concisely articulate the project's aim in one or two sentences?* - *Why is this aim important - what issue is the project addressing?* - *Make sure that this relates to the outcomes – i.e. it is plausible that the outcomes could contribute to achieving the aim.* - *Remember to state what the project is aiming to achieve, not what the activities are.*
	E1.2 (specify)	Implicit	
	E1.3 No		
E2 Do measurable outcomes exist which the activity can affect, that contribute to the aim?	E.2.1 (specify)	Stated	- *Remember the distinction between outcomes (what the project aims to achieve), and outputs (for example the number of young people who will take part).* - *Make sure outcomes are specific and measurable.* - *If the project has many outcomes, please select which are consider to be the most important ones. - For each outcome describe how it is related to the activities and the aim.*
	E2.2 (specify)	Implicit	
	E2.3 No		
E3 Are there clearly specified activities that contribute to the outcomes?	E3.1 (specify)	Stated	*These should include:* - *A concise outline of each activity* - *The context in which the activity is delivered (in schools, after-school club, etc.)* - *A description of the target population (age, gender, ethnicity, etc.) If the project contains many activities, please select the most important ones that contribute the most to the outcomes and aim.*
	E3.2 (specify)	Implicit	
	E3.3 No		
E4 What evidence was used in the design of the project?	E4.1 (specify)	Stated	*This could include the organisation's evidence from other work, best practice guidance, evaluations of similar projects and literature reviews.*
	E4.2 (specify)	Implicit	
	E4.3 No		
E5 Is there a theory of change diagram?	E5.1 (specify)	Stated	*This is a diagramatic representation of the project, for more information on*

	E5.2 (specify) Implicit	Theory of Change please see the Project Oracle website: http://project-oracle.com/.
	E5.3 No	

<table>
<tr><td colspan="3">Section F: Level of Evidence – Standard 2</td></tr>
</table>

F.1 Is there a before and after analysis of impact?	F1.1 Stated (specify)	*The evaluation measures changes in the outcomes in an appropriate way. This can include qualitative and quantitative methods.*
	F1.2 Implicit (specify)	
	F1.3 No	
F.2 Are measurement tools described?	F2.1 Stated (specify)	
	F2.2 Implicit (specify)	
	F2.3 No	
F.3 Does the evaluation describe the participants?	F3.1 Stated (specify)	
	F3.2 Implicit (specify)	
	F3.3 No	
F.4 Does the report include procedures for recruiting participants and what happens after the end of the project?	F4.1 Stated (specify)	
	F4.2 Implicit (specify)	
	F4.3 No	
F.5 Does the report include how the consent of participants was obtained, and confidentiality maintained, and any other ethical considerations?	F5.1 Stated (specify)	
	F5.2 Implicit (specify)	
	F5.3 No	
F.6 Does the report include details of the processes by which measurement tools	F6.1 Stated (specify)	
	F6.2 Implicit (specify)	

were used by the evaluators and the participants, for example if a survey was used, a description of how and when the survey was distributed and the conditions under which they were filled out.	F6.3 No	
F.7 Does the report include details of any statistical analyses are outlined, with the results of these written in clear language?	F7.1 Stated (specify)	
	F7.2 Implicit (specify)	
	F7.3 No	
F.8 Does the report include details of any statistical analyses are outlined, with the results of these written in clear language?	F8.1 Stated (specify)	
	F8.2 Implicit (specify)	
	F8.3 No	
F.9 Does the report include a review / critique of the limits of the methods?	F9.1 Stated (specify)	
	F9.2 Implicit (specify)	
	F9.3 No	
F.10 Does the report describe any differences between original evaluation plan and actual evaluation are outlined?	F10.1 Stated (specify)	
	F10.2 Implicit (specify)	
	F10.3 No	
Section G: Level of Evidence – Standard 3		
G.1 Does the report include justification as to why this evaluation design is the most appropriate?	G1.1 Stated (specify)	
	G1.2 Implicit (specify)	
	G2.3 No	
G.2 If the tools were designed for this	G2.1 Stated (specify)	

evaluation, does the report provide details of how they have been tested? Does the report include them?	G2.2 Implicit (specify)	
	G2.3 No	
G.3 Does the report include a description of how control groups and/or other comparison data were selected?	G3.1 Stated (specify)	
	G3.2 Implicit (specify)	
	G3.3 No	
G.4 Does the report include a discussion of potential biases that may have resulted due to the measurement processes?	G4.1 Stated (specify)	
	G4.2 Implicit (specify)	
	G4.3 No	

[1] Gill T (2011) Children and nature a quasi-systematic review of the empirical evidence. Greater London Authority; London.

[2] Davies D, Jindal-Snape D, Collier C, Digby R, Hay P, Howe A. (2013) Creative learning environments in education—A systematic literature review. Thinking Skills and Creativity 8: 80 – 91.

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