Élaborer des projets de recherche efficaces en plein air

Developing effective outdoor research projects

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Research needs to be rigorous, systematic and stand up to scrutiny. Essentially it involves the potential for knowledge creation. Empirical research evidence is becoming a more integrated part of outdoor practice. Funders and stakeholders will often seek evidence for what works, why and how in practice; as practitioners gain more experience, they will become reflective and reflexive practitioners looking for the meaning and efficacy of their practice for continuing professional development. For academics and researchers, including students in higher education, research has moved away from intrinsic value into extrinsic meaning and the impact and influence that their research has on policy and practice.

For research to be effective, it has to ask the right questions, collect or examine relevant data or information, be ethical, sit within appropriate theoretical or philosophical frameworks and be reported and scrutinised. For the development of effective outdoor research projects, the focus is on asking appropriate, suitable and answerable research questions. This chapter examines how gaps in outdoor research might be identified, generic considerations in setting research questions, how we know what questions to ask and the challenges that may be encountered in answering them.

Identifying research areas

Sometimes, given the broad range of outdoor practice, defining an area of interest in which there are questions to ask and be answered through research is challenging, particularly for practitioners, students and early career researchers. The following section offers some suggestions as to how to identify an area of interest in which to ask research questions and how to ascertain gaps in outdoor research as a good foundation for developing effective projects.

Previous research projects

Reading published and unpublished material may give some insight into areas that will initiate questions, identify gaps in research or highlight topics of interest. Research does not have to be 'new'; it can repeat or extend existing research. Although those in academia may have privilege in being able to access peer-reviewed journals (such as the *Journal of Adventure Education and Outdoor Leadership; Journal of Outdoor and*

Environmental Education; Journal of Experiential Education, and *Journal of Outdoor Recreation and Leadership* covering outdoor disciplines, see Prince et al., 2018; Seaman et al., 2020), practitioner journals, reports, 'grey' literature, websites and books are worthy of scrutiny. Often unpublished theses or dissertations will contain a summary towards the end of 'suggestions for future research' although that would assume interest in the area to begin with and access to the text.

Large scale published studies often take the form of reviews of existing evidence across a specified outdoor context or timescale. These may be 'systematic reviews' (reviews of all the extant evidence that fits the pre-specified eligibility criteria to answer the research questions) or more general evidence-based reviews of the literature and/or other reported research. Some studies also report a 'meta-analysis' with a systematic review, a statistical procedure to combine numerical data from multiple separate studies.

Rickinson et al., (2004), for example, conducted a review of evidence-based research. They examined 150 pieces of research on outdoor learning from 1993 to 2003 in the UK. The research provided a clear endorsement for certain kinds of outdoor learning provision, but the aims of programmes were not always realised in practice. This review identified through research the need to deliberate and reflect on certain issues in practice. This large-scale study, although conducted some time ago, is still referred to in respect of identifying gaps in research or areas in which repeat studies might be useful.

Also, in the UK, Fiennes et al., (2015) (The 'Blagrave' Report) examined the evidence base about the effectiveness of outdoor learning through systematic review of academic literature and inviting submissions of research. They found that almost all outdoor interventions have a positive effect (or that was the way in which the research was reported), that effects measured immediately after an intervention were stronger than measures a few months later, and overnight and multi-day activities had a stronger effect than shorter experiences. The published report did cause the outdoor sector to reflect on the ways in which research should be informing practice. Fiennes et al., (2015) also emphasised the importance of reliability of research. If research is unreliable (i.e. it cannot be replicated) then its potency as a source of information for practice, in this case planning programmes etc. is questionable. It is important to recognise that research relying on primary data is time specific and when it is reported, published or read, practice might have changed or developed. For example, there is now more recent research through a form of systematic review, to indicate that the intensity rather than the duration of outdoor residential experiences has stronger impact on participants in the longer term (defined as 12 months and beyond) (Prince, 2021). Thus, short but intense overnight adventurous experiences such as 'microadventures' (Humphreys, 2014) for example, might have a more lasting effect on individuals than longer residential programmes. Interestingly, the *reasons* for these differences are subject to speculation and more empirical research may provide answers (and perhaps ask more questions such as, do the outcomes depend on opportunity, environment, demographics or, if in a led group, the skills of the facilitator?).

There are large-scale research studies that are considered seminal (i.e. ones that are considered original and the foundation of future developments) in which findings are still considered to be reliable and valid. Hattie et al.'s (1997) meta-analysis of 151 unique samples from 96 studies of adventure programmes to examine their effect on a range of outcomes such as self-concept, locus of control and leadership is such an example. In addition to aiming to synthesise the findings across many studies, the research sought to ascertain the magnitude of effect sizes (a way of quantifying the size of the difference between samples). Their results suggested that adventure programmes can have notable outcomes and strong, lasting effects but that there is variability in outcomes between different studies, programmes and individuals. Outcomes improved as the length of the programme and the age of participants increased.

However, the reasons for these findings are largely conjecture. A practitioner might reflect that older participants are more likely to be able to recognise the benefits of adventure programmes and that different providers will have different objectives. It could be that variability in intended outcomes for outdoor programmes depends on participants' motivation and engagement and the facilitator's skills in directing the group towards specified outcomes, or the importance they or their employer place on achieving them. They could, for example, be more interested in the gain that each individual will make over the duration of a programme. Interestingly, the study excluded effects from studies considered to be of low quality and not in scope (for example, school-based programmes that were non-challenging and often of shorter duration). Thus, although Hattie et al.'s (1997) study is regarded as sound, evaluative research, it is important to determine the parameters of research, particularly if a replication or extension of any of the projects or findings is considered.

Literature and media allow practitioners to explore or have heightened consciousness to areas of research and practice outside of their milieu. Research broadens and deepens that understanding and context. For example, an outdoor activity such as rock climbing may be seen for its benefits in personal and social development and group interaction, but the wider public health agenda might prioritise its physical and mental health and wellbeing outcomes. Does rock climbing have any nature 'connections' benefits? Perhaps that is another research question.

Reflective practice

Ryan (2005) notes the importance of reflection and reflexivity in research inquiry. Reflection is 'learning and developing through examining what we think happened on any occasion, and how we think others perceived the event … opening our practice to scrutiny by others' (Bolton, 2018, p.13). In relation to research, there may be an area of practice from which questions will arise for an individual or on a collective basis (such as review of an area of practice by an organisation). Reflection usually deepens with more experience (Blenkinsop et al., 2016). For example, reviewing may be a constituent part of the delivery of outdoor activities for a group. A beginning practitioner might use review tools that they have seen others use or have read about. A more experienced

practitioner might question whether these review tools are effective. Are the groups and/or individuals gaining anything that might help them in a future activity or have transfer value for life skills? If not, could the review be changed or adapted to may it more meaningful? Is there a place for the review to be matched to the individual or group to maximise learning?

'Reflective practice' is a practice whereby professionals become aware of their implicit knowledge, behaviours, values and impact and learn from their experience (Schön, 1983). It has been identified as a threshold concept for students completing at least a major in outdoor education in Australia (Thomas et al., 2019). Practitioners should explore current thinking, research and practice and consider the interactions between them and what this means for their own practice and that of others. In the example above, the practitioner might consider the way in which they deliver the outdoor activity and research in what way this might affect outcomes. 'Reflexive practice' involves questioning self-attitudes, thinking, values, assumptions, prejudices and habitual actions of an individual in relation to others. Researchers need to acknowledge the ways in which they might influence findings from their own demographic or philosophical perspective, for example, and be conscious that conclusions and knowledge created may be subject to that positionality (Prince, 2021).

Research can broaden the understanding and awareness of the larger field of work for practitioners outside their own milieu. For example, a teacher recognising the benefits of learning outdoors for their students might see the outcomes as knowledge and skills relating to the curriculum. There may also be benefits relating to the 'null' (not taught) and/or 'hidden' (implicit learning) curricula (Eisner, 1985) such as health and wellbeing and personal and social development. Research in these areas may allow the teacher to identify the wider benefits of their work, their integration with wider agendas and further questions that should be addressed through research projects.

The nexus of practice and research

Knowing what would constitute effective research and how to go about it is key to developing a project. Perhaps the most important outcome of Fiennes et al., (2015) was that their recommendations have led to reflection and rethinking (in the UK at least) about strengthening the evidence base and for a much closer working relationship between practitioners and researchers to prioritise research topics and manage the sector-wide research agenda. Practitioners need to reflect on their practice and ask questions that would benefit from research, and researchers need to ensure that they are working to answer questions, or to address issues or problems that have real impact on practice. To this end, there is now a network of active research-practice hubs in the UK comprising both practitioners and researchers to inform and influence local policy and an overarching 'Strategic Research Group' that gathers evidence to inform policy at government level (see Hedges, Loynes and Waite, 2019). This type of model of working also helps the dissemination of unpublished research (for example, in theses, dissertations or research reports) and the collation of evidence.

A recent research study (Clark et al., 2020) explored the effectiveness of these research-practice hubs and sought to ascertain the value of these for participants in order to inform their future development. 28 respondents remarked that the benefits of involvement in the hubs included capturing evidence of the effectiveness of outdoor learning and communicating this internally across the sector and to stakeholders and wider society, and developing a research strategy to support this task by prioritising and resourcing a joined-up approach across the sector.

The research has been effective in indicating the ways that research-practice hubs can focus in the future, namely: Communicating research through sharing research findings with practitioners in accessible and relevant ways; Facilitating research by supporting practitioners, providers and user groups to develop research that can help develop and argue for effective programmes; and, collaborating in research through supporting providers, policy makers and communities to develop and evaluate relevant progressive outdoor learning. A key objective for the future is therefore, equipping and supporting practitioners to become researchers themselves to extend the evidence base.

Setting appropriate research questions

It is important to know what research questions to ask in relation to designing *effective* outdoor research projects. Navigating the research process is complex and there are many generic texts that are appropriate for supporting researchers in undertaking outdoor research projects (e.g. Humberstone & Prince, 2019; Quay et al., 2018). The stating of a research question (or hypothesis) on a defined issue, challenge or theme is fundamental to developing a research project. Hypotheses tend to be set for a positivist paradigm (scientific method), where data analysis involves statistical testing. Whilst outdoor research projects do involve such a quantitative approach, many take a qualitative or mixed method approach and usefully utilise research questions as starting and reference points throughout.

There are many considerations for setting good research questions that will underpin effective research projects: clear, intelligible and unambiguous; focused but not too narrow; relevant and useful (to policy, practice or theory development); informed by, and connected to existing research and theory with the potential to make an original contribution, feasible given available resources including time and expertise; and, of interest to the researcher (Lewis, 2003). The latter is key to motivation and sustained involvement in a research project, 'If your research focuses on a topic that you are passionately interested in, you are more likely to be motivated from the outset and your motivation is more likely to be sustained' (Haigh, 2013, p. 62).

Denscombe (2010, pp. 11-12) describes different types of research questions (examples may be seen as unfocused but could be directed towards specific projects, interventions, group or demographic):

- Predicting an outcome (often more easily stated as an hypothesis) e.g. ‘What are the differences in the performance in orienteering between males and females?’
- Explaining the causes and consequences of a phenomenon e.g. ’Are there different outcomes for participants with and without dyslexia from an outdoor programme?’
- Evaluating a phenomenon e.g. ‘What are the experiences of trans and non-binary participants in paddlesports?’
- Describing a phenomenon e.g. ‘Stand Up Paddleboarding (SUP): why do it?’
- Developing good practice. e.g. ‘What are the key enablers for implementing outdoor learning in a primary school?’
- Empowerment e.g. ‘How can young people’s voices influence a local action for climate change project?’
- Comparison e.g. ‘Are short-term effects of outdoor adventure residential experiences greater than longer-term effects?’

Of course, research questions are not mutually independent and may cross a typology and should lead to developing good practice. For example, listening to young people’s voices (empowerment) in a comparative study. In many research projects there is more than one question and these, too, can be of different types. Defining research questions is useful to avoid a lack of focus such as immersion a research setting whilst hoping that ideas will emerge, unstructured ideas and becoming a ‘grand theorist’, focusing on general, non-specific and abstract concepts that are not amenable to testing.

Pathways for the development of effective research projects

Once a researcher has planned for impact, influence and meaning of a project, identified what they want to find out and why, it is useful to ensure that the project is feasible. Prince & Mallabon (2019, p. 34) provide a pathway analysis to support emerging researchers in planning an effective project. These include factors such as the consideration of opportunities for primary data collection, the availability of secondary data or information and bibliographic material, and resources (including time, software, costs etc). If existing resources are not sufficient for the project, it will be important to source funding to carry it out. While this can be a challenging area, partnerships between researchers, practice organisations and end users are often more successful in attracting funding than researchers on their own. Commissioned research is normally the exception to this. In recent times if the project involves young people, for example, funders expect them to be involved in the design of the project and discussion around the difference it would make for them. It is also useful to plan a timescale using a Gantt chart or similar, particularly where there is a defined deadline (such as for the submission of the report or thesis). Within this, there is the opportunity to build in time information searches and literature reviews., and contingency.

Much outdoor research concerns human participants and as such researchers need to consider how their actions will affect participants, their families, the researcher, the research community and the public consumers of research in a right, proper and moral way. Research must be ethical and acceptable causing no physical and/or psychological harm to participants, honest and non-discriminatory. In universities, there will be Research Ethics Panels or Committees; in other organisations there will be similarly constituted mechanisms by which ethical approval can be given (see Humberstone & Riddick, 2019; Ashworth, Maynard & Stuart, 2016 for ethics in outdoor research). If the research involves hazardous activities, for example using outdoor technical skills, then a risk assessment is also needed. Ethics forms also may ask the applicant to identify the benefits of their research; risk benefit analysis is important for participants in the research itself and in any hazardous activities that they may be asked to undertake.

It is helpful to develop research projects within a support framework, even if working individually rather than collaboratively. There might be more experienced researchers (e.g. project supervisors) with whom you can discuss your research and setting up a buddy system or joining a group of researchers in a similar position is usually helpful not only for the research but for the personal, emotional and social journey.

The development of an effective project is not just about pragmatics; the research should also be placed in an appropriate theoretical and philosophical framework. There are numerous generic research books that can support this area of planning and contextualisation, and include explanations of paradigms, methodologies and methods (e.g. Creswell & Creswell, 2018; Denscombe, 2017; Denzin & Lincoln, 2018). However, another approach might be to examine the theoretical and conceptual frameworks that other research projects have used on which to frame their design, development and interpret their outcomes. One example is a 'theory of change' or logic model. A theory of change is a 'map of causal links, which seeks to explain why and how an intervention has impact' (Noble et al., 2017, p. 1). It reflects the processes involved in making change happen and the relationship between elements or variables included in an intervention and is becoming more regularly invoked to describe what factors in outdoor practice effect change and the reasons why. Such frameworks have been used in many contexts including sail training voyages (Noble et al., 2017) and schools (see, for example, https://www.langdalecofeschool.co.uk/teaching-and-learning/ for describing the approach, curriculum, impacts and outcomes of Learning Outside the Classroom). The advantages of using a theory of change framework are promoted by the Institute of Outdoor Learning (professional body in the UK) as '…invaluable for understanding why an intervention works' (IOL, 2020) and follows a recommendation of the Blagrave Report.

Although it is always good to look at research as a positive and exciting activity, there are pitfalls and challenges to most projects and often the need to deviate, change or re-think the design with a solution-focused mindset. Such challenges might be in terms of time and access (or not) to data, the demands and expectations of stakeholders that might not have been completely mutually understood when the project started, and environmental or

contextual factors (such as the weather or pandemics). The questioning self-belief of the researcher is common, particularly in longer and more individualised research projects. A good piece of advice in addition to the support networks described above, would be to always focus on the research question – what are you trying to find out and why? This helps to limit drift and maintain focus.

Reporting research

Although research might have an intrinsic interest or appeal, a research project might not be very effective if it is not reported. This might be through text (e.g. report, thesis, dissertation, pamphlet, publication) or via a blog or through visual or some other media or creative activity. It is also important to disseminate it to a wide range of audiences via conferences, workshops or social media. If you can present it to an audience who will be interested in using it to effect change, or make a difference to practice, your research will seem more worthwhile and meaningful. One piece of advice in respect of making your research more visible especially in textual formats is to title it carefully to indicate the outcomes for readers. So 'the sustained value teachers place on outdoor learning' rather than, 'teachers' perceptions of outdoor learning in the curriculum'. It is also valuable to receive feedback from scrutiny that will help you to judge the effectiveness of your project. Recent guidelines on reporting empirical research in 'outdoor' journals have been published to give guidance to researchers (Seaman et al., 2020). These guidelines emphasise the foundation concerns of the AERA statement (2006) of the importance of 'warrantability' (the adequacy of evidence in justifying results and conclusions) and 'transparency' (the explicitness of the logic connecting all parts of the research report).

The quality of research is critical for university researchers across all disciplines in relation to the recognition of their work and funding for research in higher education, and the indicators of high-quality research are worthy of statement. The *impact* of research is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life beyond academia (Research Excellence Framework, (REF) 2019) with a defined causal chain. The *significance* of research is the extent to which the work has influenced, or has the capacity to influence, knowledge and scholarly thought, or the development and understanding or policy and/or practice. Furthermore, the extent to which the output makes an important and innovative contribution to understanding and knowledge in the field -its *originality*, is another key metric. REF (2019) also emphasises rigour as the extent to which the work demonstrates intellectual coherence and integrity, and adopts robust and appropriate concepts, analyses, sources, theories and/or methodologies. An example in outdoor practice might be to reflect on the effects of time spent in the outdoors for a group on their mental health (*impact* shown through a causal chain). The *significance* of this is in the development of policy and practice in health services. It is original as the causal link has not previously been reported in the field of occupational therapy for that particular demographic. It should be stated that generally, it would be difficult for less experienced researchers to score highly in these quality metrics, although they are useful for reference. An *effective*

research project should take a systematic, reliable approach to answering a research question to find something out that has meaning for practice.

Conclusion

Outdoor studies in its broadest conceptualisation covers a breadth of interdisciplinary and transdisciplinary considerations in pedagogy, research and practice. Developing effective outdoor research projects can be challenging for experienced researchers, let alone students or practitioners as neophyte researchers. However, it is exciting and might even be considered an adventure. This chapter has outlined some of the ways of identifying a research area in which the outcomes will have meaning for professional practice. Setting appropriate research questions in an appropriate theoretical and philosophical framework is important but to be effective, the research project also has to be feasible and robust. Reflective and reflexive practice both as an individual and collaboratively can initiate research questions and a supportive framework will enable the realisation of meaningful research. With sound knowledge and direction, there are many more possibilities to be realised in outdoor research; it is a growing field of opportunity for exploration.

References

American Educational Research Association (AERA). (2006). Standards for reporting on empirical social science research in AERA publications. *Educational Researcher, 35*(6), 33-40. Doi: 10.3102/0013189X035006033. Available at: https://www.aera.net/Portals/38/docs/12ERv35n6_Standard4Report%20.pdf

Ashworth, L. Maynard, L. & Stuart, K. (2016). Ethical considerations in outdoor studies research. In, B. Humberstone, H. Prince & K.A. Henderson (eds.) *International handbook of outdoor studies* (pp. 198-206). London, New York: Routledge.

Blenkinsop, S., Telford, J., & Morse, M. (2016). A surprising discovery: Five pedagogical skills outdoor and experiential educators might offer more mainstream educators in this time of change. *Journal of Adventure Education and Outdoor Learning*, *16*(4), 346–348. Doi:10.1080/14729679.2016.1163272

Bolton, G. (2018). *Reflective practice: Writing and professional development*. (5th ed.) London: SAGE.

Clark, J., Fletcher, E., Loynes, C., Prince, H. & Tiplady, L. (2020). *2020 Outdoor Learning Research Hub Survey*. Newcastle University, Centre for Learning and Teaching (CflLaT) and University of Cumbria.

Creswell, J.W. & Creswell, D.J. (2018). *Research design: Quantitative, qualitative and mixed methods approaches*. 5th Ed. Los Angeles: SAGE.

Denscombe, M. (2010). *Ground rules for social research.* 2nd ed. Maidenhead, UK: McGraw Hill Education.

Denscombe, M. (2017). *The good research guide for small-scale research projects*. 6th Ed. London: OUP.

Denzin, N.K. & Lincoln, Y. S. (2018). *The SAGE handbook of qualitative research*. 5th ed. London: SAGE.

Eisner, E.W. (1985). *The educational imagination: on the design and evaluation of school programs*. Wisconsin, US: Collier Macmillan.

Fiennes, C., Oliver, E., Dickson, K., Escobar, D., Romans, A. & Oliver, S. (2015). *The existing evidence-base about the effectiveness of outdoor learning*. London: London: UCL Institute of Education. Evidence for Policy and Practice: Information and Co-ordinating Centre (EPPI-Centre) and Giving Evidence. The Blagrave Report.

Hattie, J., Marsh, H.W., Neill, J.T. & Richards, G.E. (1997). Adventure education and Outward Bound: Out-of-class experiences that make a lasting difference, *Review of Educational Research,* 67(1), 43–87 (1997). https://doi.org/10.3102/00346543067001043.

Hedges, C., Loynes, C. & Waite, S.J. (2019). Research Hubs: the theory-practice nexus. In, B. Humberstone & H. Prince (Eds.) *Research Methods in Outdoor Studies*, (pp. 317-328). Oxford; New York: Routledge.

Haigh, N. (2013). A framework and process for conceptualising and designing a new research project. In, R. Donnelly, J. Dallat & M. Fitzgerald (Eds.) *Supervising and writing good undergraduate dissertations* (pp. 19-42). E-book: Bentham Science Publishers.

Humberstone, B. & Prince, H. (Eds.) (2019). *Research methods in outdoor studies*. London, New York: Routledge.

Humberstone, B. & Riddick, C. C. (2019). Ethical issues and practicalities in outdoor studies research. In, B. Humberstone & H. Prince (Eds.) *Research methods in outdoor studies* (pp. 21-32). London, New York: Routledge.

Humphreys, A. (2014). *Microadventures: Local discoveries for great escapes.* London: William Collins.

Institute for Outdoor Learning (IOL) (2020). Theory of Change. Available at: https://www.outdoor-learning.org/Good-Practice/Good-Practice/Theory-of-Change

Lewis, J. (2003). Design Issues. In, J. Ritchie & J. Lewis (Eds.) *Qualitative Research Practice. A guide for social science students and researchers* (pp. 47-76). London: SAGE.

Noble, J., Kenley, A. & Patel, S. (2017) *Association of Sail Training Organisations (ASTO) theory of change, evidence review and measurement framework*. Southampton: ASTO.

Prince, H. (2021). Outdoor environmental education research and reflective practice, In, G. Thomas, J. Dyment & H. Prince (Eds.) *Outdoor Environmental Education in Higher Education: International Perspectives* (pp. 349-361). Cham, Switzerland: Springer.

Prince, H.E. (2021) 'The lasting impacts of outdoor adventure residential experiences', *Journal of Adventure Education and Outdoor Learning,* 21(3), 261-276. Doi: 10.1080/14729679.2020.1784764

Prince, H. & Mallabon, E. (2019). Designing effective research projects in Outdoor Studies. In B. Humberstone & H. Prince (Eds.) *Research Methods in Outdoor Studies* (pp. 33-43). Oxford; New York: Routledge.

Prince, H, Christie, B., Humberstone, B. & Pedersen Gurholt, K. (2018). Adventure education and outdoor learning: Examining journal trends since 2000. In P. Becker, C. Loynes, B. Humberstone & J. Schirp (Eds.) *The changing world of the outdoors* (pp. 144-159). Oxford: Routledge.

Quay, J., Bleazby, J., Stolz, S., Toscano, M., & Webster, R. S. (2018). *Theory and philosophy in educational research: Methodological dialogues*. Routledge.

Research Excellence Framework, REF (2019). Panel criteria and working methods. https://www.ref.ac.uk/media/1084/ref-2019_02-panel-criteria-and-working-methods.pdf. Accessed 15 May 2020.

Rickinson, M., Dillon, J., Teamey, K., Morris, M., Choi, M.Y., Sanders, D. & Benefield, P. (2004). *A review of research on outdoor learning.* London: National Foundation for Educational Research & King's College, London.

Ryan, T. (2005). *When you reflect are you also being reflexive*? Nipissing University, Canada. https://www.oar.nipissingu.ca/PDFS/V812E.pdf. Accessed 15 May 2020

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action.* New York, NY: Basic Books.

Thomas, G., Grenon, H., Morse, M., Allen-Craig, S., Mangelsdorf, A. & Polley, S. (2019). Threshold concepts for Australian university outdoor education programs: findings from a Delphi research study. *Journal of Outdoor and Environmental Education*, 22, 169–186 (2019). *Doi:* 10.1007/s42322*-019*-00039-1

Seaman, J., Dettweiler, U., Humberstone, B., Martin, B., Prince, H. and Quay, J. (2020) 'Joint recommendations on reporting empirical research in outdoor, experiential, environmental and adventure education journals.' *Journal of Experiential Education,* 43(4), 348-364. Doi: 10.1177/1053825920969443.