Routledge
Taylor & Francis Group

Journal of Adventure Education and Outdoor Learning

ISSN: 1472-9679 (Print) 1754-0402 (Online) Journal homepage: www.tandfonline.com/journals/raol20

Forest School for wellbeing: an environment in which young people can 'take what they need'

Lucy S E Tiplady & Harriet Menter

To cite this article: Lucy S E Tiplady & Harriet Menter (2021) Forest School for wellbeing: an environment in which young people can 'take what they need', Journal of Adventure Education and Outdoor Learning, 21:2, 99-114, DOI: 10.1080/14729679.2020.1730206

To link to this article: https://doi.org/10.1080/14729679.2020.1730206

Published online: 29 Feb 2020.

Submit your article to this journal

Article views: 13554

View related articles

View Crossmark data

Citing articles: 28 View citing articles

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=raol20

JOURNAL OF ADVENTURE EDUCATION AND OUTDOOR LEARNING
2021, VOL. 21, NO. 2, 99–114
https://doi.org/10.1080/14729679.2020.1730206

Routledge
Taylor & Francis Group

Check for updates

Forest School for wellbeing: an environment in which young people can 'take what they need'

Lucy S E Tiplady[a] and Harriet Menter[b]

[a]School of Education, Communication and Language Sciences, Newcastle University, Newcastle upon Tyne, UK; [b]Scotswood Garden, Newcastle upon Tyne, UK

ABSTRACT

This paper presents data from a Forest School project aimed at impacting upon children and young people's emotional wellbeing. It uses a theory of change methodology to evaluate impact and explore the causal processes within the project. Mixed methods data are presented and analysed in relation to how different parts of the Forest School approach, as defined by the principles, lead to impact. The data demonstrate that whilst impact was seen for all, for individual young people the impact has been significant in specific ways. It would appear that many of the children and young people were able to develop in different ways to their peers and we argue 'take what they need' from their Forest School experience. Theory of change has been demonstrated to be a valid and useful tool in evidencing the complex processes that lead to change through a Forest School approach.

KEYWORDS

Forest School; emotional wellbeing; theory of change

Introduction

This paper discusses the impact of a Forest School project on the emotional wellbeing of two groups of young people currently unable to access mainstream education in the UK due to severe anxiety and/or emotional, social and behavioural difficulties. It uses a theory of change methodology to assess impact and to examine the causal processes involved in the programme. There is an increasing focus on children and young people's (CYP's) mental and emotional wellbeing in both public health and education. It is recognised to have a significant impact on CYP's 'cognitive development, learning, physical health and mental wellbeing in adulthood' (Public Health England, 2015). For the purpose of this paper, we are using the definition of psychological wellbeing used by Liddle and Carter as being made up of a positive emotional state and a positive outlook (Liddle & Carter, 2015).

What is Forest School?

Forest School (FS) is an outdoor educational experience, undertaken in woodland or an outdoor environment with trees. Originally adapted in 1993 for early years by Bridgwater College, Somerset, from Scandinavian models, FS has now been used across the UK and beyond with children, young people and adults of varying ages, needs and abilities (Knight, 2011). The Forest School Association (FSA) in consultation with members has produced six guiding principles (FSA, 2019).

CONTACT Lucy S E Tiplady lucy.tiplady@newcastle.ac.uk School of Education, Communication and Language Sciences, Newcastle University, King George VI Building, Queen Victoria Road, Newcastle upon Tyne NE1 7RU, UK

© 2020 Institute for Outdoor Learning

(1) FS is a long-term process of regular sessions, rather than a one-off or infrequent visits; the cycle of planning, observation, adaptation and review links each session.
(2) FS takes place in a woodland or natural environment to support the development of a relationship between the learner and the natural world.
(3) FS uses a range of learner-centred processes to create a community for being, development and learning.
(4) FS aims to promote the holistic development of all those involved, fostering resilient, confident, independent and creative learners.
(5) FS offers learners the opportunity to take supported risks appropriate to the environment and to themselves.
(6) FS is run by qualified Forest School practitioners who continuously maintain and develop their professional practice.

The FS approach has become an increasingly popular initiative in English primary schools (Prince, 2018), as well as a range of other educational and community contexts. With this expansion there has been variability in how FS has been enacted, for example, many schools deliver 6-week programmes which arguably is not long-term. Some researchers have expressed concerns over this rapid development and possible dilution (McCree, 2019; Sackville-Ford, 2019), as well as questioning the lack of research evidence for some of the claims made, for example, in relation to self-esteem (Leather, 2018). There are meta-analyses and multi-project evaluations that have evidenced the benefits of time spent in nature on health and wellbeing (Goodenough & Waite, 2020; Kuo, Barnes & Jordan, 2019), although at present no meta-analysis for FS specifically. There is, however, a developing body of research of the positive benefits of FS for CYP, practitioners and school staff, parents/carers and extended families (Coates & Pimlott-Wilson, 2019; Cumming & Nash, 2015; Harris, 2018; Maynard, 2007; Murphy, 2018; Ridgers, Knowles & Sayers, 2012; Waite & Goodenough, 2018) and some specifically in relation to well-being and behaviour (McCree, Cutting & Sherwin, 2018; O'Brien & Murray, 2007; Roe & Aspinall, 2011). Much of the research has focused on early childhood (Button & Wilde, 2019; McCree et al., 2018; O'Brien & Murray, 2007) and primary-aged children (Coates & Pimlott-Wilson, 2019; Ridgers et al., 2012) and there has been little written about the causal processes of these benefits within a FS programme and how these are related to the six principles outlined above. This article seeks to address this gap and draws on data from both primary and secondary aged CYP.

The Breeze Project

The Breeze Project intended to use the FS approach to improve the wellbeing of CYP from two educational settings currently unable to access mainstream education due to extreme anxiety and/or social, emotional and behavioural difficulties. The FS practitioner worked as the education manager for an independent charity in the North East of England and was an experienced FS practitioner and trainer. Breeze was designed so that the practitioner and school staff worked in partnership to co-design and co-deliver tailored FS provision for each group of young people. Sessions were intended to build confidence and wellbeing through providing enjoyable and achievable challenges in a supportive environment, developing good relationships and using structured reflection to encourage the young people to internalise the positive self-narratives that emerged. Typical activities included den building, putting up and using hammocks, tree climbing, fire building and cooking, tool use and woodwork, arts and crafts, games and exploration of nature. Sessions took place at a community garden, with an established woodland and a dedicated FS area, for a school day, once a week during term-time, for a school year (September 2017-July 2018). A researcher was involved from the start of the project and worked with the practitioner and school staff to collect evidence to monitor and evaluate the impact.

A cycle of planning, delivering and reflecting on sessions for each young person was integral to the project and allocated time was committed by the school and FS practitioner to facilitate this on a weekly basis. Fortnightly researcher observations fed into reflection and planning, either through face-to-face meetings with the FS practitioner and/or school staff or where this wasn't possible detailed notes through email. Two staff from each school additionally committed to completing FS training (one at Level 3 and one at Level 1[1]) alongside the project so that at the end of the year school staff could continue to deliver FS with distance support from the FS practitioner. A steering group made up of the project staff, senior management from each school, plus experts in education and educational psychology met termly.

School 1

School 1 was a primary Additionally Resourced Centre (ARC) with up to 12 places for children aged 4 to 11 years currently unable to access mainstream education due to emotional and behavioural difficulties. The research studied five children enrolled in the ARC at the time the FS project started; the children were aged 5, 8, 10, 10 and 10 years at the start of the project. Two children left the ARC part way through the research (one after 4 months and the second after 6 months both to transfer to specialist educational provision); it was decided in discussion with the school and the FS practitioner to retain their data within the study. Additional children joined the ARC during the latter part of the research period, they took part in the project but their data was not included in the research. On average there was a ratio of 1 adult to 1.5 CYP during sessions (for further detail on the adults' roles and FS training please see Appendix 1).

School 2

School 2 was a secondary specialist provision for young people aged 11 to 16 years exhibiting severe anxiety, many of whom have a history of non-attendance in mainstream education. Some of the young people had been enrolled for a number of years, whilst others accessed short-term placements before returning to their home school. The school has a high number of in year transfers and experienced a particularly high number during the first two terms of the research period, this resulted in the group attending FS increasing from 11 to a possible 20 if all students were in attendance. During the second term (about half way through the project) it was decided by the school and practitioner to reduce the group to eleven of the younger members (aged 12 to 13 years) and it is on these young people that the research focused; five of the young people had experienced the project from the start whilst six joined later but experienced a minimum of 6 months of FS. On average there was a ratio of 1 adult to 3 young people (for further detail on the adults' roles and FS training please see Appendix 1).

Methods

Research design

The research design used a co-production approach in engaging with the FS practitioner and school staff. Co-production has been described as professionals and community members or groups working together to develop and deliver services (Needham & Carr, 2009) and Hatzidimitriadou, Mantovani & Keating (2012) argue that co-production should include the reciprocal transfer of knowledge, skills and expertise, from which all benefit. The research drew on this principle that each partner brought their own experiences and expertise that together could benefit one another as the project progressed and impact upon change. It was agreed to use a theory of change framework for the research; this had the dual purpose of supporting the co-production process through articulating our own separate perspectives, aims and ambitions within the project, whilst also working towards a co-produced framework (the steps of change) for evaluating the outcomes of the project. Theory of change is proven to be particularly effective in evaluating complex and multi-

strand projects (Dyson & Todd, 2010) as was the case with Breeze. Theory of change helps us to explore the causal processes within the FS programme that are responsible for the impact, and examine in more detail how the six FS principles are put into practice and how this leads to impact.

In depth interviews with key members of staff in each of the schools and with the FS practitioner articulated the situation in each context together with the anticipated actions and outcomes of the project. These theories were then negotiated between the school staff, the practitioner and researcher, with a resulting theory of change articulating how the project team envisaged how impact would come about. The outcome of this negotiated theory were three separate, although interconnected, strands (Tiplady, 2018, p. 6):

(1) CYP's emotional wellbeing;
(2) CYP developing the skills necessary to be ready to learn; and
(3) FS recognised as an effective strategy for impacting upon CYP's emotional wellbeing and readiness to learn.

This paper examines the first of these strands, emotional wellbeing. Figure 1 shows the steps that project partners theorised would lead to an impact on the CYP's emotional wellbeing.

Research has reported on the impact of woodland experiences on wellbeing (Acton & Carter, 2016; McCree et al., 2018) with some research on Forest School using before and after assessments of wellbeing (Keogh & Greaves, 2018; Roe & Aspinall, 2011). These studies have been broadly positive but have revealed mixed results and highlighted the complexities of using wellbeing measures with children and the potential for them to be influenced by a range of outside factors. Taking these factors into account it was decided to assess wellbeing through a range of qualitative and quantitative data (collected in partnership with the CYP, schools and practitioner). The outcomes of this data were then compared to the Stirling Children's Well-being Scale (Liddle & Carter, 2015) in identifying what outcomes are associated with children's wellbeing.

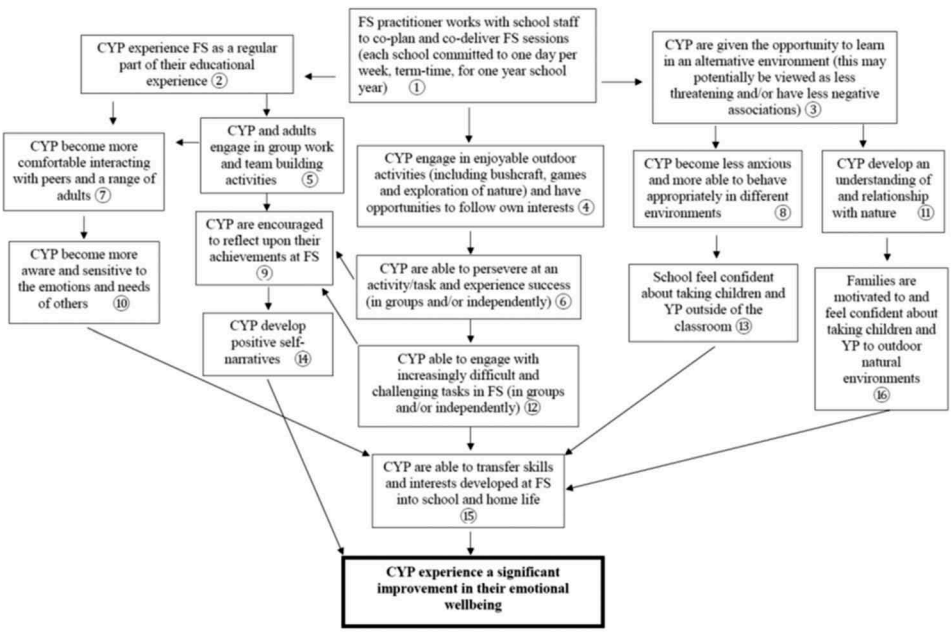

Figure 1. Emotional wellbeing strand steps of change as theorised by project partners.

Table 1. Agreed data collection in each case study school.

School 1	School 2	Data collected by
Fieldwork observations of FS sessions	Fieldwork observations of FS sessions	Researcher
Student attendance	Student attendance	School
Student behavioural data	-	School
-	Student social and emotional literacy self-assessments	CYP and school
FS planning and evaluation (including observations of individual CYP in each session)	FS planning and evaluation (including observations of individual CYP in each session)	Practitioner, school and researcher
Interview data with practitioner and school staff	Interview data with practitioner and school staff	Researcher
Interviews with CYP (photographic reflection, informal questions and/or semi-structured)	Interviews with CYP (photographic reflection, informal questions and/or semi-structured)	Researcher
-	Individual FS diaries	CYP
Class FS diary		CYP and school
Interviews with parents/carers	Interviews with parents/carers	Researcher

An evaluation plan was co-developed with stakeholders, based on evidencing (or refuting) the theory of change. The agreed mixed methods data for each school is detailed in Table 1.

In this way, the school staff and FS practitioner were invested in the research process itself and played an active role in data collection alongside the researcher. The CYP were consulted on how they wished to contribute to the research, with some engaging in photographic reflections, others FS diaries, some informal conversations during sessions and others in semi-structured interviews back in school. In using a co-production approach the researcher felt confident in the authenticity of findings, however, it is also the case that working in genuine partnership requires a sharing of power, with data collection being negotiated between partners (Clark & Laing, 2018).

Semi-structured interviews (audio-recorded) with school staff and the FS practitioner happened at regular intervals throughout the project, together with more informal discussions during planning and reflection meetings and the week-to-week delivery of sessions (recorded in written notes). The researcher interviewed a number of the CYP in school but was led by the wishes of individuals and so these took a number of forms (semi-structured, reflection on photographs and/or diaries, informal conversations in class). Some interviews with young people were audio-recorded, whilst many others were recorded using written notes in accordance with individual's wishes. Semi-structured telephone interviews were conducted with four parents/carers (one from school 1; three from school 2) towards the end of the research period and recorded using written notes.

The researcher attended FS sessions with each school fortnightly, using ethnographic-inspired data collection methods such as participant observation, fieldnotes and informal interviewing such as using walking probes (De Leon & Cohen, 2005). Detailed descriptions and understandings of the FS communities were developed through engagement with the CYP and staff. In doing so the researcher formed relationships with the participants and arguably became a part of these communities herself; it is acknowledged that there is some risk of bias in such an approach, however, it is believed that this engagement was key to developing an authentic understanding (Hobbs, 2006) and in working in a genuinely participatory way. The theory of change provided a robust framework to collect a range of data that would support or refute the outcomes identified and explore causal mechanisms (Laing & Todd, 2015) and the mixed methods approach created the possibility of triangulating data, thereby increasing confidence and validity in findings (Miles & Huberman, 1994).

Ethics

Participants and stakeholders were fully consulted and gave informed consent to take part in the research. It was explained that due to the co-production design, the researcher would share observational and interview data with school staff and the FS practitioner in order to inform the ongoing evaluation and planning of sessions. However, beyond the project, anonymity of participants would be maintained. School staff and the FS practitioner gave written consent and played an

active role in the research design and process itself; the researcher believes that such an approach goes ethically further than obtaining consent by genuinely valuing stakeholders' knowledge, experiences and expertise (Hatzidimitriadou et al., 2012). The CYP were consulted appropriately to their age and development, the researcher made it explicit to all young people that participation in the research was voluntary and non-participation would not negatively impact upon them in any way, this was reiterated at regular intervals throughout the research. On a session to session basis the researcher would ask permission to join a group or individual and/or to ask questions, respecting their wishes at all times. Young people were consulted as to how they would like to contribute (or not) to the research. Parents and carers were informed of the research by an information and consent form, which emphasised that participation in the research was voluntary and would not affect their child's involvement in FS. Parents/carers were additionally asked whether they would like to participate in the research. Parents/carers gave written consent for their child and/or their own involvement in the research and for school data to be shared with the researcher. A liaison in each of the schools was identified and made known to the young people and parents/carers in addition to the researcher's contact details, so that should any concerns arise over the research period individuals would have a known point of contact. The researcher obtained full ethical consent from her university institution and followed the British Educational Research Association (BERA, 2018) ethical guidelines, together with adhering to each school's safeguarding policies.

Data analysis

Data analysis used a combination of deductive methods, in relation to evidencing (or not) the theorised steps of change, with a more open thematic analysis of the qualitative data. Whilst acknowledging the researcher as 'a central and active participant' (Rapley, 2001, p. 317) who had been integral in developing the theory of change and in collecting the qualitative data, a thematic analysis using stages 1–5 of Braun and Clarke's six phase process (Braun & Clarke, 2006, p. 87):

(1) Familiarizing yourself with your data.
(2) Generating initial codes
(3) Searching for themes
(4) Reviewing themes
(5) Defining and naming themes
(6) Producing the report

sought to be open enough to identify any unanticipated outcomes not theorised by the project team. Relevant quantitative data (student behavioural data and self-assessed student social and emotional literacy questionnaires) was analysed using individual and group means.

Results

The thematic analysis identified four inter-related themes:

- Engagement and enjoyment
- Relationships and interactions with others
- Perception of self
- Beyond FS

These themes are closely related to the steps of change within the emotional wellbeing strand of the theory of change and help us to understand how change is occurring within this strand.

Engagement and enjoyment

School 1

Researcher observations and school and practitioner planning and evaluation documents provided evidence that the FS sessions were co-planned and co-delivered as anticipated and that the children experienced the FS sessions as a regular part of their educational experience over the school year. Across the interview data, young people, school staff and parents/carers all commented on the young people's enjoyment of FS. This is particularly significant in that these young people often displayed negative emotions towards activities and would frequently refuse to participate at school. The young people described FS as 'fun', appreciating the opportunity to 'get outdoors', 'run around', experience nature and take part in bushcraft activities. For these CYP, FS activities were very different to those experienced at home and school.

> Really enjoyed it, it's the most fun day of the week, pure amazing! (CYP)

> I like watching the birds and seeing what they do, how they move and how they live their lives as a bird. (CYP)

Across the year there were isolated incidents when CYP expressed negative feelings towards FS, typically when they became upset about another issue. These negative feelings were always short lived and the young person would often check out that they were still returning to FS. The school experienced no cases of the young people refusing to attend FS and two parents/carers reported that their child was happy to cooperate in getting ready for school on FS days, whilst other days could be a 'battle'. In one school, this enjoyment began to be used as a motivational incentive for the young people.

> Steven's[2] behaviour has really improved recently, he's been here three years and we've seen the biggest change in the last six months. Dad used to say 'you just have to get to Wednesday and then it's Forest School' … That then caught on and Steven was saying it to the others to help them and now they all say it. (Class teacher)

The prospect of FS appeared to help segment the week and make it less daunting for students. The class teacher reported that:

> Even though they are spending less time in class they have more in their books than this time last year because before they would refuse to do any work for maybe three out of five days. (Class teacher)

School 2

As with school 1, enjoyment and engagement were important outcomes of the FS project. Young people reported enjoying the opportunity to be outside, the sense of space and opportunity for physical activities and games.

> It's good, you're outside, not in school, you feel more free. (CYP)

> It's a great place to get active and you can let your imagination go wild! (CYP)

Other young people highlighted their appreciation of nature, together with spending time with friends.

> It's good, nice … being outside in nature, it's nice to relax, I find it very relaxing. (CYP)

> Being outdoors, learning in a fun way and being with friends. (CYP)

For the young people, FS appeared to offer an environment that was qualitatively different to school, although the reasons for that varied from having space to be physically active, time to relax in nature or through learning in a more enjoyable way. Interviews with parents/carers further supported this view that FS was both enjoyable and engaging for the young people.

> Well it takes her mind off what she is worrying about, she worries a lot, about everything, she can't sleep, she can't let it go, but Forest School seemed to occupy her. She enjoyed making things out of wood that she had found and she would bring them home and show us. (Parent/carer)

> In school he can find the busyness difficult, there's too much going on, but at Forest School he had that sense of space. (Parent/carer)

One young person (Jim) did find the FS environment challenging and towards the first half of the project would often withdraw from the group, pulling his hat over his face and refusing to participate. In reflection with the researcher Jim revealed that he found the FS environment stressful because he had too many choices, he did not know what to do and found choosing who to work with difficult. This was in contrast to the school environment in which work was more structured and completed individually. With the support of adults, Jim was able to integrate into the group, at first by joining others in a watching capacity, this developed into working alongside others and eventually playing and working with others. Jim still had times when he felt unsure or relationships would become strained and he would withdraw for a short time, but he was able to return and reintegrate into the group.

Researcher evaluation of the data concluded that there was substantial evidence that steps 1–5 of the theory of change (Figure 1) had been achieved through the project.

Relationships and interactions with others

An important feature of FS is to provide opportunities for young people to form positive relationships with others, it was therefore theorised that the children would become more comfortable interacting with peers and a range of adults at FS and that this would eventually transfer into school and home life, contributing to an improvement in emotional wellbeing. Throughout the project care was taken to ensure that the young people's basic needs were met (providing warm clothes and shoes, food and drink), time taken by the new adults to form and develop trusted relationships with the CYP and support given to scaffold interactions between the CYP where appropriate.

School 1

At the beginning of the project, teachers reported that the young people typically found social interactions difficult, with group work activities in class often ending in confrontation. Observational data from FS revealed that initially many of the young people would choose to engage in their own activities, in many cases heavily supported by an adult. The high student to adult ratios enabled this to happen.

> Steven asks Mrs Layton if they can build a fire and she agrees, explaining that they will have to make some preparations before they can get started. Together they collect wood of different sizes, Mrs Layton shows Steven examples and he follows her lead. Back at the fire circle they sort the sticks into different sizes and then Mrs Layton shows Steven how to make a waffle for the base and build the layers up. Steven seems to be listening but is keen to get the flint and steel out. Steven has a few goes with the flint and steel but finds the technique difficult, Mrs Layton demonstrates on some cotton wool. Steven seems slightly alarmed at how quickly the cotton wool alights and becomes anxious about having a go himself, stating that it's dangerous and could set his clothes alight. With reassurance from Mrs Layton about the safety measures in place and further reassurance that the technique is difficult and requires practice, Steven eventually lights his fire. (Researcher observations)

However, over the school year, this adult support was slowly reduced and the young people began to interact more with their peers, developing skills in communication and negotiation and visibly enjoying their time with one another. This was noted by the class teachers and a parent/carer.

> For the first time in the last few weeks we're seeing him playing more imaginatively with others at Forest School, like the other week when he had a sword fight and playing pirates . . . he was actively playing in a way we've not really seen anywhere else. (Class teacher)

> Recently Sally and Trey worked together to build a design; she was happy to accept someone else's ideas and build a plan with someone else, in the past it would be her way and she was very dismissive of others. (Class teacher)

> Well it's that team building and getting on with others, which he can find difficult, you know social skills and in school they would fall out with each other but doing this seemed to bring them together. (Parent/carer)

Young people also developed relationships with a range of adults whilst at FS. Teachers reported at the start of the project that the young people found it difficult to interact with unknown adults, they would often behave inappropriately and that this made it difficult for them to engage in a range of activities outside of the classroom or in their home lives. Through the project the young people developed relationships with the FS practitioner and researcher and additionally had opportunities to interact with volunteers who worked at the community garden where the FS sessions took place.

> Generally they are more accepting of change. Forest School has given them experiences of working with different people and on different activities. Henry used to find change very difficult but he's really built his confidence to interact with a range of adults. (Teacher)

These relationships may have been facilitated by an alternative dynamic in the decision-making power between young people and adults at Forest School compared to the classroom, as the young people noted:

> Good, it's fun. You get to do what you want as long as it's not dangerous. (CYP)

> You can do pretty much anything you like as long as you follow the Forest School rules. (CYP)

These improvements in relationships and interactions with others at FS were also supported by school monitoring data. School behavioural records (using the Antecedent, Behaviour, Consequence method (Dyer, 2013) when behaviour was deemed unacceptable) were compared for four students across the school year (or until one student left) on FS and non-FS days, see Table 2.

Table 2. School 1 recorded behavioural incidents of four students (Antecedent, Behaviour, Consequence method).

Student	Mean number of recorded behavioural incidents per non-FS session (am/pm) attended	Mean number of recorded behavioural incidents per session (am/pm) attended at FS
1	0.32	0.24
2	0.50	0.32
3	0.22	0.04
4	0.38	0.29
Group	0.36	0.22

In all cases, the number of recorded behavioural incidents were less at FS compared to school, with the group mean reducing from 0.36 incidents per session (am or pm) on non-FS days to 0.22 incidents at FS sessions.

School 2

In the secondary school, many of the young people appreciated FS as a place where they could spend time with friends and in some cases form new friendships.

> We can also get to know each other a bit better, we can chat more. I've got to know Emma better because we never really talk at school. (CYP)

The school began to recognise FS as an effective place to develop relationships and began to use it as part of their strategy in integrating new students

> The social element is important as well because a lot of our students have had unsuccessful experiences in other schools … Forest School has helped massively with that. (Senior leader)

> It's a venue where they can form different friendships, with adults like Harriet but also with each other, there are students who work together at Forest School who wouldn't interact that much in school. (Learning support assistant)

Nevertheless, some young people could find interacting with others difficult, this could be exhibited in either withdrawing from the group (as in the case of Jim) or in more challenging and at times aggressive behaviour. This was difficult to manage when the group numbers were at their highest, however, once they were reduced, adults were able to support the young people in overcoming these challenges and finding alternative ways to communicate with others.

> David has built himself a hammock out of nets, Jim comes over and sits in the hammock and David becomes immediately upset shouting that Jim is too heavy and will break his hammock. Jim is upset and complains that David is saying he is fat and doesn't want to be his friend. Jim withdraws to the fire circle and pulls his hat over his eyes. Harriet approaches David and explains that Jim is upset, David is initially insistent that Jim is too heavy but Harriet encourages David to think about what he could do to help his friend who is now upset. Harriet then approaches Jim to see if he would like to practise using the flint and steel, after a short time working with Harriet, Jim re-joins David and Kieron by the hammocks. David offers Jim a seat in a second hammock he has built. (Researcher observations)

Researcher evaluation of the data found substantial evidence that steps 6, 7, 9 and 12 had been achieved and that there was further evidence that steps 8 and 10 had been achieved for some, but not all, of the CYP.

Perception of self

FS provides supported opportunities for young people to experience challenge and achieve success. This was felt to be particularly important for these young people as they had previously experienced multiple unsuccessful experiences leading to poor self-image.

School 1

During their time at FS, the CYP were supported through frustrations and were able to succeed in a number of areas, for example, in building and lighting fires, in cooking for the group, in building dens and structures, in woodwork, arts and crafts and in tree climbing. The young people gradually became more independent during sessions and accordingly, the adults were able to take a less active role.

> I think that they see themselves as experts now in different things, some of the children aren't necessarily academically strong but they have been able to achieve in different ways and roles within the class. (Class teacher)

The school staff believed that these successes resulted in the young people taking on greater risk taking and this was supported by observational notes.

> Henry in the last couple of weeks has really blossomed, he's taking a lot more safe risks like tree climbing which he would never do in the beginning, he's pushing himself more. (Class teacher)

> Steven spends time in the trees with Sarah and Michael. Sarah and Michael are able climbers and easily climb onto the platform but Steven is much less sure and stays lower down. At one point his foot becomes stuck and he shouts for help, he seems anxious and upset … Steven tests out a ladder, made by Michael, he takes a few steps up and then down … Steven takes the ladder to where the platform has been secured in a tree, he uses the ladder to climb onto the platform. Steven shouts down 'hello land dwellers, this tree house is amazing!' (Researcher observations)

The young people were encouraged to reflect on these experiences and internalise positive self-narratives, although they often found self-reflection difficult and didn't always want to engage. Nevertheless, during the third term of the project, some of the young people did begin to externalise some of these experiences.

> I'm proud of my bench. I had a problem with the nail, it was in the wrong place, it took me a while to get the nail out but I didn't give up. (CYP)

School 2

Part of the FS project was an explicit intention to help the young people to reflect upon their experiences and to internalise positive self-narratives. This was achieved in some cases, where young people were able to reflect upon their successes and share these with the researcher.

> I used to be really worried about it (climbing trees) and couldn't do it but Milly and David helped me, they supported me and encouraged me, Milly was like 'You can do it!' and now I can climb the lower branches on the trees I know are stable. (CYP)

> The first time I went to Forest School I felt quite nervous, I had a phobia about fires but now I really like building fires and using the flint and steel, you just have to be careful of sparks … I feel pretty proud that I've actually done that now. (CYP)

In some cases, parents/carers were able to share their views of how FS had impacted:

> Well it's doing something he has never dreamed of doing, before we struggled to get him outdoors, he wouldn't even go on a school trip, but he really took to the Forest School and that's given him confidence. (Parent/carer)

As part of usual school data collection, students completed a self-assessed emotional literacy questionnaire in the first and third terms of the project, however, because of the high mobility of students and the reduction in students attending the Breeze Project in the second term, only five young people completed both assessments. For these students, there was a mean increase of 1 point (out of 100) over a 6-month period which was not deemed to be meaningful, although there was variability across students (for further detail see Appendix 2).

Researcher evaluation of the collective data found that step 9 had been met through the project and there was evidence to support step 14 for some but not all CYP at the end of the research period. Steps relating to perseverance and challenging tasks (steps 6 and 12), which feed into perception of self, had also been met.

Beyond FS

School 1

At the beginning of the project the school identified that it was difficult to take the children outside of the classroom, that their behaviour would often become inappropriate and that situations could quickly escalate. This restricted the opportunities available for the class and their engagement in learning. It was theorised that the children's experience of FS, in an alternative setting with a range of adults, would support the children to feel comfortable outside of the classroom and help the school to feel more confident in engaging in such opportunities. It was also theorised that families would become more confident and motivated to visit outdoor environments.

Teachers reported that many of the young people were keen to take objects or photographs home from FS and parents/carers confirmed that the young people were usually keen to talk about their experiences at FS, whilst they were often reluctant to talk about other school activities. In some cases, this was supported by the young person's developing relationship with nature both in FS and beyond. In one case this resulted in the young person joining a Saturday group.

> Henry's mam absolutely loves the Forest School, she has started taking him to a Saturday group. I think it's the only activity that he does out of school so the fact that he's keen to go and his Mam has the confidence to take him somewhere like that is significant. (Teacher)

By the end of the research period, school staff felt confident in taking the young people to the Forest School site which had become an embedded part of the class provision. However, there remained concerns about other visits and trips.

School 2

School staff welcomed developments seen at FS, including newly formed friendships and the integration of new students. It was noted that some CYP were able to have much more positive experiences at FS compared to school, however, in interview staff did not feel that these positive experiences were reflected in the classroom. Factors that may have contributed towards this include: school 2 was a secondary provision, the students had a number of different teachers and support assistants, most of whom did not attend FS and so were unable to see the developments made at FS and make the connections back at school; secondly many of the successes seen at FS were towards the end of the project (when student numbers were reduced) and so may not have had adequate time to be integrated back at school. The young people themselves often struggled to make connections between their time at FS and other areas of their lives, although interviews with some parents/carers (as above) did indicate positive effects beyond FS.

Researcher evaluation found that there was evidence to support step 11 for some, but not all, young people and that there was some evidence to support steps 13, 15 and 16 but that at the end of the research period the evidence was not sufficiently strong.

Figure 2 displays researcher evaluation of where there was substantial evidence to support the theory of change step (green) and where there was either evidence for some but not all of the CYP or where the evidence at the end of the research period was not deemed to be sufficiently strong (amber). There were no cases in which there was evidence to refute the theorised steps of change.

Discussion

The theorised steps of change and four themes from the data analysis are recognised as components of children's wellbeing both by children themselves (The Children's Society, 2012) and by researchers (Liddle & Carter, 2015). This supports the theory of change expounded by the schools and FS practitioner as externally valid. The research presents evidence for both schools that many of the steps of change were fully achieved and others were achieved for individual CYP. After 1 year of the

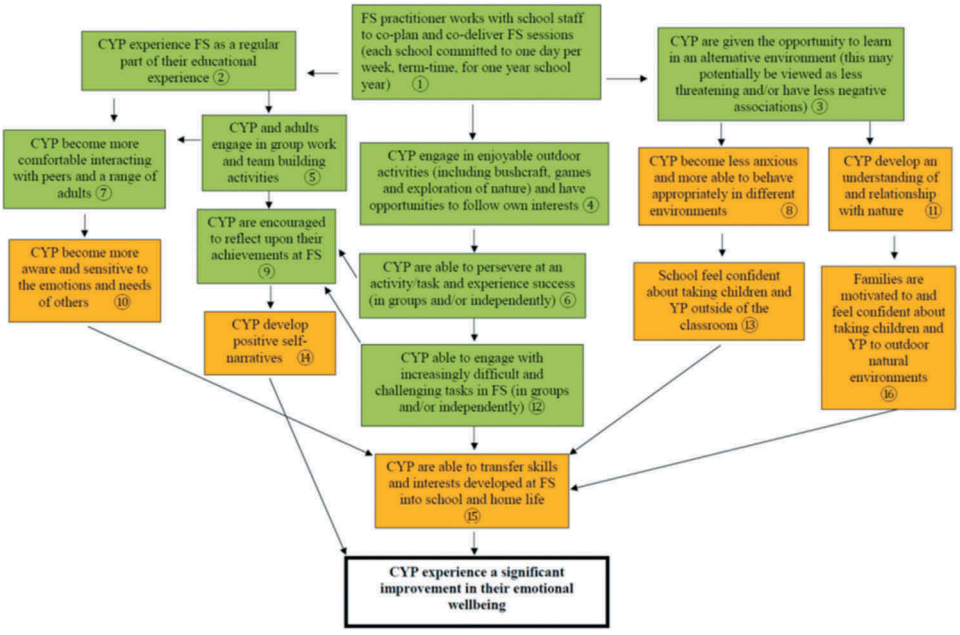

Figure 2. Researcher evaluated emotional wellbeing strand steps of change.

project, there is not enough evidence to conclude that there has been a significant impact on the emotional wellbeing of all CYP who participated, however, in evidencing progress along the steps of change the research demonstrates the positive impact of the project in line with the anticipated theory.

The richness of the data produced by this research, particularly the interviews with CYP, parents/carers and school staff, and the researcher observations helps us to understand some of the causal processes that have led to this impact, and understand how different parts of the FS approach, as defined by the FS principles (FSA, 2019), lead to this impact. For example, the interview data, especially from CYP, demonstrates that the enjoyment they experienced is closely related to the setting. This is in part due to the opportunity for contact with nature (principle 1), and in part due to the way the young people experienced the setting as a significantly different space with a different set of expectations (principle 3). This reflects recent findings by Coates and Pimlott-Wilson (2019) in which children described experiences of FS and the importance of play and autonomy which were seen to be in contrast with the classroom experience. We also saw how these different expectations proved a challenge for some students who were used to a more structured day.

The researcher observations and the interviews with adults involved suggested that the progress made in terms of relationships and social interactions is due to a range of factors including the support of trained practitioners (school staff and the FS practitioner; principle 6), although the impact here may come from the high adult to child ratio as well as the skills of the staff. The high ratio means staff are often able to scaffold interactions for students who struggle and help them gain skills and develop relationships. Another factor here is the focus on holistic development (principle 4) within the FS approach, and the understanding from school staff and the FS practitioner that supporting children to develop relationships is a valid outcome to aim for during the school day. A further factor is that the activities offered at FS and the type of play opportunities offered by the woodland setting often require students to work together. The learner-led pedagogy (principle 3) means that if a student is involved in an activity it is through choice, therefore students often find themselves trying to work through difficult interactions, because they are invested in the projects and games they have chosen. As the ability to manage relationships and interactions takes time to develop, the long-term nature of FS (principle 1) underpins all of the above. This shows how the theory of change offers insight into complex projects, such as FS, that address a variety of issues in a messy, holistic way.

The rich data also showed how for individual CYP there was evidence that impact had been very significant in specific ways. It would appear that many of the CYP were able to develop in different ways to their peers and we argue 'take what they need' from their FS experience. So for example, some made progress in developing the skills to interact with peers and participate in group activities whilst others developed a new interest and appreciation of woodland as a place to relax. Both of these developments were seen to be what the individual needed at that time in their lives or development. The learner-centred pedagogy (principle 3) of FS seems crucial to this and is notably different to the pedagogy many young people experience in the classroom environment as articulated by the young people themselves. Waite and Goodenough (2018) describe this in terms of cultural density theory, arguing that FS provides 'important cultural and material contrasts' (p. 25) in the English education system 'represent(ing) a space of divergence and freedoms' (p. 41). This reflects the assertion made in the literature relating to play and its value for children's development: that given the freedom and support, children will find opportunities to learn about whatever it is they need to learn about at that moment in their lives or their development (Brown & Patte, 2013).

Using a theory of change approach enabled us to understand a complex process in depth and detail, and to see the 'finer grain' of what was happening for each individual. This allowed us to see that the Breeze Project provided different benefits for different CYP as seen above. All of the benefits identified are steps towards emotional wellbeing and components of it. We argue that an evaluation approach only focused on measuring the outcomes of the project in terms of impact on emotional

wellbeing may have missed this and may have failed to highlight the importance of the learner-led pedagogy of the FS approach in achieving this impact.

In conclusion, the research from the Breeze project provides evidence that FS can be an effective process for improving CYP's emotional wellbeing. The learner-led pedagogy was identified as a critical factor in allowing CYP to 'take what they need' from the process. The young people identified this as crucially different to the classroom experience with which they were struggling. This identifies a significant short fall in the predominant approach to teaching and learning in England and supports Waite and Goodenough (2018) assertion that FS challenges current pedagogy in the educational system. Theory of change has been proved to be a valid and useful tool in evidencing the complex processes that lead to change through a FS approach. Longitudinal research is needed to provide further evidence for our theory of change, and to increase the evidence base available to decision-makers both in England and internationally. A one-year project is relatively short term when the desired outcomes are life changing. We have begun the next 3-year phase of the Breeze Project and the research will continue to track the two original schools from this pilot as well as three new schools. In response to the research from this pilot year, the FS practitioner has worked with schools to ensure that each Breeze group has no more than 12 CYP participating, maintaining high adult to child ratios of on average one adult to two CYP, and that adults attending are consistent and where possible FS trained. The researcher continues to use theory of change with the schools and FS practitioner to articulate how change is envisaged and to collect a range of data to evidence how it is enacted through the project.

Notes

1. https://www.forestschoolassociation.org/forest-school-qualification/.
2. All names are pseudonyms.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the Economic and Social Research Council [ES/M500513/1, Newcastle University].

Notes on contributors

Lucy S E Tiplady is a research associate in Education at Newcastle University. Working collaboratively with schools and the wider education community, Lucy's research interests include children and young people's wellbeing, outdoor learning, alternative pedagogies, and co-produced, participatory and visual research methods.

Harriet Menter is the education manager at Scotswood Garden, a community garden in an economically deprived area of Newcastle upon Tyne. Harriet manages a programme of environmental education, Forest Schools and Forest School training. She is particularly interested in using Forest School as a way of working with those children and young people who struggle most in our education system.

References

Acton, J., & Carter, B. (2016). The impact of immersive outdoor activities in local woodlands on young carers emotional literacy and well-being. *Comprehensive Child and Adolescent Nursing*, *39*(2), 94–106.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101.

British Educational Research Association (BERA). (2018). *Ethical guidelines for educational research* (fourth ed.). London: BERA.

Brown, F., & Patte, M. (2013). *Rethinking children's play*. London: Bloomsbury.

Button, J., & Wilde, A. (2019). Exploring practitioners' perceptions of risk when delivering Forest School for 3- to 5-year-old children. *International Journal of Play*, *8*(1), 25–38.

Clark, J., & Laing, K. (2018). Co-production with young people to tackle alcohol misuse. *Drugs and Alcohol Today*, *18*(1), 17–27.

Coates, J. K., & Pimlott-Wilson, H. (2019). Learning while playing: Children's Forest School experiences in the UK. *British Educational Research Journal*, *45*(1), 21–40.

Cumming, F., & Nash, M. (2015). An Australian perspective of a forest school: Shaping a sense of place to support learning. *Journal of Adventure Education and Outdoor Learning*, *15*(4), 296–309.

De Leon, J. P., & Cohen, J. H. (2005). Object and walking probes in ethnographic interviewing. *Field Methods*, *17*(2), 200–204.

Dyer, K. (2013). Antecedent-Behavior-Consequence (A-B-C) analysis. In F. R. Volkmar (Ed.), *Encyclopedia of autism spectrum disorders* (pp. 175–180). New York, NY: Springer.

Dyson, A., & Todd, L. (2010). Dealing with complexity: Theory of change evaluation and the full service extended schools initiative. *International Journal of Research and Method in Education*, *33*(2), 119–134.

Forest School Association (FSA). (2019). Principles of Forest School. Retrieved from: https://www.forestschoolassociation.org/what-is-forest-school/

Goodenough, A., & Waite, S. (2020). *Wellbeing from woodland: A critical exploration of links between trees and human health*. London: Palgrave MacMillan, Cham.

Harris, F. (2018). Outdoor learning spaces: The case for forest school. *Area*, *50*, 222–231.

Hatzidimitriadou, E., Mantovani, N., & Keating, F. (2012). *Evaluation of coproduction processes in a community-based mental health project in Wandsworth*. London: Kingston University/St George's University of London.

Hobbs, D. (2006). Ethnography. In V. Jupp (Ed.), *The sage dictionary of social research methods* (pp. 101–103). London: Sage.

Keogh, S., & Greaves, G. (2018). *Forest School project final report*. Derbyshire: Derbyshire Environmental Studies Service.

Knight, S. (Ed.). (2011). *Forest School for all*. London: Sage.

Kuo, M., Barnes, M., & Jordan, C. (2019). Do experiences with nature promote learning? Converging evidence of a cause-and-effect relationship. *Frontiers in Psychology*, *10*, 305.

Laing, K., & Todd, L. (2015). *Theory-based methodology: Using theories of change for development, research and evaluation*. Newcastle upon Tyne, UK: Newcastle University.

Leather, M. (2018). A critique of Forest School: Something lost in translation. *Journal of Outdoor and Environmental Education*, *21*, 5–18.

Liddle, I., & Carter, F. A. (2015). Measuring mental wellbeing in children and young people. Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/768983/Measuring_mental_wellbeing_in_children_and_young_people.pdf

Liddle, I., & Carter, G. F. A. (2015). Emotional and psychological well-being in children: The development and validation of the stirling children's well-being scale. *Educational Psychology in Practice*, *31*(2), 174–185.

Maynard, T. (2007). Forest School in Great Britain: An initial exploration. *Contemporary Issues in Early Childhood*, *8*(4), 320–331.

McCree, M. (2019). When Forest School isn't Forest School. In M. Sackville-Ford & H. Davenport (Eds.), *Critical issues in Forest Schools* (pp. 3–20). London: Sage.

McCree, M., Cutting, R., & Sherwin, D. (2018). The hare and the tortoise go to Forest School: Taking the scenic route to academic attainment via emotional wellbeing outdoors. *Early Child Development and Care*, *188*(7), 980–996.

Miles, M., & Huberman, A. (1994). *Qualitative data analysis: An expanded sourcebook* (*2nd* ed.). London: Sage.

Murphy, M. C. (2018). Exploring the "construction" strand in the Irish primary school visual arts curriculum through the Forest School approach. *Journal of Adventure Education and Outdoor Learning*, *18*(3), 257–274.

Needham, C., & Carr, S. (2009). *Co-production: An emerging evidence base for adult social care transformation*. London: Social Care Institute for Excellence.

O'Brien, L., & Murray, R. (2007). Forest School and its impacts on young children: Case studies in Britain. *Urban Forestry & Urban Greening*, *6*, 249–265.

Prince, H. E. (2018). Changes in outdoor learning in primary schools in England, 1995 and 2017: Lessons for good practice. *Journal of Adventure Education and Outdoor Learning*, Advance online publication. doi: 10.1080/14729679.2018.1548363.

Rapley, T. J. (2001). The art(fullness) of open-ended interviewing: Some considerations on analysing interviews. *Qualitative Research*, *1*(3), 303–323.

Ridgers, N. D., Knowles, Z. R., & Sayers, J. (2012). Encouraging play in the natural environment: A child-focused case study of Forest School. *Children's Geographies*, *10*(1), 49–65.

Roe, J., & Aspinall, P. (2011). The restorative outcomes of forest school and conventional school in young people with good and poor behaviour. *Urban Forestry & Urban Greening*, *10*, 205–212.

Sackville-Ford, M. (2019). What does 'long-term' mean at Forest School? In M. Sackville-Ford & H. Davenport (Eds.), *Critical issues in Forest Schools* (pp. 33–44). London: Sage.

The Children's Society. (2012). *Promoting positive wellbeing for children: A report for decision-makers in parliament, central government and local areas*. London: Author.
Tiplady, L. (2018). *Impacting on young people's emotional wellbeing through Forest School: The breeze project, pilot year*. Newcastle upon Tyne: Research Centre for Learning and Teaching, Newcastle University. Retrieved from https://www.ncl.ac.uk/cflat/publications/guides/.
Waite, S., & Goodenough, A. (2018). What is different about Forest School? Creating a space for an alternative pedagogy in England. *Journal of Outdoor and Environmental Education*, *21*, 25–44.

Appendix 1. Adults and CYP participating in the Breeze Project

	School 1	School 2
Adults attending	- Two specialist teachers (one completing Level 3 FS Certificate & one Level 1 FS Award) - Teaching assistant (completing Level 1 FS Award) - Forest School practitioner (Level 3 FS Certificate) - Researcher every other session (Level 1 FS Award) Total = 4-5 adults per session	- Specialist teacher (completing Level 3 FS Certificate, first school term only) - Teaching assistant (Level 1 FS Award) - Forest School practitioner (Level 3 FS Certificate) Additional adults attending some but not all sessions - Teaching assistant (no FS training) - Volunteer (specialist teacher, Level 1 FS Award) - Researcher every other session (Level 1 FS Award) Total = 4-6 adults per session
CYP attending	Between 5 and 8 per session	Between 11 and 18 per session

Appendix 2. School 2 student self-assessed emotional literacy questionnaire data using the GL Assessment of Emotional Literacy student checklist

Scores are out of 100 with the following scoring system:

Student	December 2017	June 2018	Difference
1	80	82	+2
2	67	75	+8
3	64	67	+3
4	53	54	+1
5	79	71	−8
Group mean	69	70	+1

61 or below: well below average
62-66: below average
67–78: average
79–83: above average
84 or above: well above average