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Mobilising volunteers to deliver a school-based arts-in-nature practice to support children's mental health and wellbeing: a modified e-Delphi Study with primary school staff

Hilary Bungay[a], Nicola Walshe[b] and Anna Dadswell[c]

[a]School of Allied Health, Anglia Ruskin University, Cambridge, UK; [b]IOE, UCL's Institute of Education and Society, University College London, London, UK; [c]School of Education and Social Care, Anglia Ruskin University, Chelmsford, UK

ABSTRACT

Arts-in-nature practice has been shown to have positive impacts on children's mental health and wellbeing; however, introducing new innovations in schools can be challenging and requires involvement of staff in the process. The 'Branching Out' project explored how arts-in-nature practice can be scaled up to achieve greater reach in primary schools by mobilising community volunteers. We implemented an exploratory, multi-level mixed methods approach, including a modified e-Delphi study which was used to achieve consensus around a new delivery model of arts-in-nature practice in primary schools. Whilst a pilot study tested the implementation of the proposed model in one region, the e-Delphi study explored how the proposed Branching Out model, including the use of volunteers and various options for delivery, would be perceived more widely by primary school staff across different contexts. The survey incorporated implementation measures designed to determine the acceptability, appropriateness, and feasibility of the proposed model. Completion of two rounds of the e-Delphi study captured the views of 42 primary school staff members in total. The findings confirmed the acceptability of the arts-in-nature practice and the use of volunteers, suggested appropriate staff champions and groups of children who would benefit, and determined the preferred options for delivery in terms of feasibility. Overall, consensus was reached regarding the proposed model of arts-in-nature practice in primary schools with high levels of agreement regarding its acceptability, appropriateness, and feasibility. The e-Delphi study provided valuable perspectives of primary school staff that led to the refinement of the Branching Out model for mobilising volunteers to deliver arts-in-nature practice to promote children's mental health. Delphi studies have the potential to enable expert input into policy and practice and provide an opportunity for teachers to have a voice in the delivery and development of school-based interventions.

Introduction

In the UK the growing numbers of children requiring support for their mental health, and the subsequent increasing demand for mental health services, is of increasing concern. One in six children in England suffer a severe mental health illness and suicide is the third leading cause of death in young people (National Health Service (NHS), 2020). This figure is higher for vulnerable groups, such as those from low-income households, those with special educational needs and disabilities (SEND), or those who have been exposed to adverse childhood experiences (NHS Confederation, 2021). Worryingly, 70% of children and adolescents who experience mental health problems have not received appropriate support at a sufficiently early age (Department for Education (DfE), 2018). The recent NHS Confederation Report (2021) describes mounting concern that the mental health system for children and young people in England is reaching 'tipping point', arguing the need for early intervention services, including within

schools. Schools are increasingly expected to support mental health and wellbeing (e.g. Public Health England (PHE), 2021) but receive few resources to do so (Hepburn, 2018), and there are concerns that provision of mental health support in schools is patchy (Parkin et al., 2022). For mental health interventions to be successful, their implementation needs to be realistic in the primary school context and they need buy-in and support from primary school staff. One method of building support for new interventions is to use a Delphi study, which entails multiple rounds of questionnaires with the target group of people where questions become more specific in each round based on the responses to the previous round in order to arrive at a consensus. When conducted solely online, this is known as an e-Delphi study. Delphi studies have been used in the development of various mental health interventions in schools (e.g. Lyon et al., 2014; Soneson et al., 2022). Soneson et al. (2022) suggested that Delphi studies can facilitate a better understanding of the needs, concerns and beliefs of key stakeholders for the design and implementation of successful interventions. This article reports on the findings from an e-Delphi study designed to reach consensus on an arts-in-nature intervention supported by community volunteers in primary schools.

Substantial benefits for wellbeing may be derived from contact with nature (Tiplady & Menter, 2020; World Health Organization (WHO), 2016). The recent UK government's 'Sustainability and Climate Change: A strategy for education and children's services systems' describes the importance of 'learning from and connecting with nature' so that children and young people become actively involved in the improvement of their local environment (DfE, 2022, p.6.). A novel way to achieve this is through art in outdoor places (Lloyd & Gray, 2014; Phillips et al., 2015). There is evidence that arts education can aid physical, cognitive, linguistic, social, and emotional development (All-Party Parliamentary Group on Arts, Health and Wellbeing, 2017), as well as improving both mental health and social inclusion (Durham Commission on Creativity and Education, 2019). The All-Party Parliamentary Group (APPG) report, *Creative Health: The arts for health and wellbeing* (2017) suggested that arts engagement helps to mitigate the effects of an adverse environment through a range of factors, including childhood development; shaping educational and employment opportunities and tackling chronic distress; and enabling self-expression and empowerment and overcoming social isolation. Further, while there are proven links separately between nature and wellbeing, and the arts and wellbeing, there are still very few examples of projects where arts-in-nature practice has been adopted or researched (Moula et al., 2021).

The Eco-Capabilities research project provides an exception, as it explored how children from two primary schools engaged in arts-in-nature practice (Walshe et al., 2020, 2022). The arts-in-nature practice, described as 'artscaping', was delivered by arts and wellbeing organisation Cambridge Curiosity and Imagination (CCI) (www.cambridgecandi.org) who work with schools and communities to create opportunities for children's creative adventures in local, familiar, outdoor places. The children taking part in the Eco-Capabilities project demonstrated increased resilience, both as outdoor adventurers and learners; increased capacity for risk-taking; greater collaboration and empathy between peers, within and beyond the nature-based days; strengthened relationships between children and teachers, particularly those children who struggle with more traditional classroom environments; a developed sense of being able to articulate emotions not easily verbalized; a greater sense of belonging in/existence as part of nature; enhanced recognition and appreciation of biodiversity (including articulation of nature as a space for calmness and inspiration); and a developed understanding of the importance of environmental sustainability (Walshe et al., 2022). Such compelling findings warranted the investigation into scaling-up the practice delivery to reach more children.

CCI arts-in-nature projects have comprised artists working with children in school contexts which limits its scalability because of the financial resources required and the need for schools to contribute to the costs of provision. Schools, however, are facing increased financial pressures due to rising costs and underfunding (NAHT, 2022). Such pressures on school budgets limits the opportunity for funding additional activities and, therefore, limits the potential for wider implementation unless alternative methods of delivery are considered. To address some of these issues, the Branching Out research project explored the possibility of mobilising community volunteers to support arts-in-nature practice in primary schools.

The initial Branching Out model was developed following discussions with an Advisory Group, and interviews with artists and teachers from Eco-Capabilities and resources were co-designed by CCI artists and children. The proposed model involved training community volunteers as 'Community Artscapers' to

deliver and support arts-in-nature practice in schools. It was piloted across six schools in Cambridgeshire and Peterborough, including a mix of rural and urban settings within areas of high disadvantage (based on the Income Deprivation Affecting Children Index (IDACI), which measures the proportion of all children aged 0-15 living in income deprived families). The schools adapted the model to fit their available resources and access to suitable community volunteers, and the Community Artscapers were invited to a training day along with school staff where CCI artists introduced the concept of artscaping. The volunteers and staff then worked in the schools over a period of eight weeks with fortnightly supervision by an artist. The wider research incorporated a range of methods, but here we report specifically on the modified e-Delphi study that sought to explore how the proposed Branching Out model, including the use of volunteers and various options for delivery, would be perceived by a wider pool of primary school staff across different contexts.

Methods

The theoretical foundation underpinning the overall research design was the concept of implementation outcomes (Proctor et al., 2011), where the effectiveness of the implementation of an intervention is investigated rather than evaluating the outcome of the intervention itself. The following implementation outcomes: acceptability, appropriateness, and feasibility, were selected on the basis that if these outcomes are not achieved then the implementation of the intervention in its proposed form would be unlikely to succeed or be scalable more widely.

The aims of the research were to investigate how an arts and wellbeing organisation can adapt their practice and implement their offer across more school contexts, and to consider how the new model of delivery using community volunteers could fit within the existing health, social care, and education ecosystem. The overarching primary research question was: *how can community volunteers be engaged to implement arts-based practice in nature in primary schools as an approach to mitigating mental health inequalities at scale?* There were two sub-questions:

1. *How and by what process can adults in the wider community be activated as volunteers to build capacity to support children's mental health through arts-based practice in nature? [RQ1]*
2. *What partnerships are required to facilitate this model and by what processes can these partnerships best be developed? [RQ2]*

As previously stated, the modified e-Delphi study reported here was one of the research methods used within a larger exploratory multi-level mixed methods approach (Creswell & Plano Clark, 2011). The larger study included qualitative semi-structured interviews with key stakeholders from the Eco-Capabilities project which were first undertaken to inform the development of the proposed Branching Out model. In conjunction with the e-Delphi study a national survey of UK-based organisations and practitioners providing similar arts-in-nature activities was undertaken to learn what is already happening in this space and who could potentially support wider implementation of the model (Walshe et al., 2023). Finally, following the pilot of the proposed Branching Out model, interviews and focus groups were undertaken with the volunteers, school staff, and implementation leads at the six schools to understand the challenges and enablers of introducing the model. Whilst the pilot tested the implementation of the proposed model in one region, the aim of the e-Delphi study was to explore more widely how the use of volunteers in schools as Community Artscapers would be perceived and to determine teachers' preferences regarding the timing and delivery of the Branching Out model.

A Delphi study is a means of building consensus; it is a structured process using iterative rounds of questionnaires and allows participants to revise their perspectives based on the group feedback from previous rounds until consensus is reached (Bowling, 2014). There is no set standard or accepted guidelines for conducting Delphi studies, but rather the approach is guided by the scope and aims of the study and practicality. The process enables the integration of the views of experts across diverse geographic locations, an important factor in this project where the research aimed to determine the scalability of Branching Out nationally. The advantage of using this method is that it creates an understanding of local issues more broadly which could impact on the implementation of the model on a wider scale.

A further advantage of this method is that participants do not interact directly therefore avoiding a few individuals dominating the process (Boulkedid et al., 2011). The objective of this e-Delphi study was to achieve consensus around the proposed Branching Out model of delivery using Community Artscapers, and the implementation plan more widely.

Ethics

Ethical approval for this study was gained from the IOE Research Ethics Committee. All participants were informed that by completing the online survey and submitting it, they were consenting to take part in the research. All participants were asked to generate a unique identifier (day of birth and first two letters of postcode for example '12CT') to enable subsequent survey rounds to be compared. Minimal demographic data was collected (current job role, and years of working in a school setting), and participants were invited to include their email address at the end of the survey to be included in subsequent rounds, but this was held separately from the data. De-identified responses were included in the analysis, and all collected data was stored on password protected computers to be destroyed at five years following standard local guidelines.

Participant recruitment

Non-probabilistic, purposive sampling and snowball sampling was used to recruit staff working in primary schools with an interest in children and young people's mental health and wellbeing, such as Senior Mental Health Leads, SEND Co-Ordinators, Inclusion or Safeguarding Leads, as well as other primary school staff at all levels such as headteachers, teachers, and teaching assistants. In the UK there is no central database of such staff working across schools and different schools have different names for some of these roles. This makes it difficult to access staff directly and, therefore, participants were recruited to take part via emails directly to schools and Multi-Academy Trusts, training providers of Senior Mental Health Leads, Education Networks, Alliances, and Forums, as well as through the Branching Out Advisory and Stakeholder Groups, using Twitter and other social media platforms. The use of social media for recruitment to research studies has been found to be more effective than traditional recruitment methods in the number and cost of final enrolled participants, and it was hoped that it would allow us to reach this group (e.g. Sanchez et al., 2020; Whitaker et al., 2017).

Sample size

There are no strict guidelines regarding the numbers required for a Delphi study and sample sizes range from the 100s to single figures (Keeney et al., 2001). Diamond et al. (2014) suggests an initial sample of 40 participants is required to compensate for refusal or attrition across the Delphi rounds. However, Okoli & Pawlowski (2004) state that the size of the sample is dependent on the dynamics of the participant group in meeting consensus and recommended a minimum sample size of 20. The size of the study population does not depend on statistical power or representation but is dependent on the expertise of the participants (Helmy et al., 2017). Therefore, in concordance with Diamond et al. (2014), across the study we aimed for 40 participants to allow a range of opinions and the potential reveal of any divergent views, whilst considering that not every participant will complete each round of the survey.

Online survey

The online survey was hosted on Jisc Online Surveys and included grid questions, open and closed questions, and Likert scales that asked participants to rate and comment on different aspects of the proposed Branching Out model. The questions were developed by the three researchers on the research team, with input from the Branching Out Advisory Group, and included the implementation outcome measures that had been developed and previously tested for validity and reliability by Weiner et al. (2017). These measures were: the Acceptability of Intervention Measure (AIM), the Intervention Appropriateness Measure (IAM), and the Feasibility of Intervention Measure (FIM), which were adapted

for the Branching Out model. These validated measures were the primary outcome measures for the e-Delphi study because if the Branching Out model was not viewed to be appropriate, acceptable, or feasible for the school setting, then the up-scaling of the pilot would not viable. Optional open response questions asked participants to comment on the importance ratings assigned and suggest any modifications to the model. The questions were piloted for face validity by two members of the Advisory Group who worked in primary schools. Two rounds of the survey were conducted.

Round one

The first round of the survey began with a description of the previous Eco-Capabilities project and provided a link to the CCI website (see above) where a short video of the arts-in-nature practice could be viewed. Questions asked about the acceptability of the Eco-Capabilities approach as the foundation of the model. It then introduced the Branching Out model using Community Artscapers (referred to as the Community Artscapers programme in the survey) and asked more specific questions about appropriateness within their school context (for example, does the school already engage in arts-in-nature practice or work with volunteers, how would children respond, which groups of children would benefit most). It also asked participants to rate different possibilities for how the Branching Out model could be delivered (for example, volunteers working with whole class alongside school staff, small group taken out of class) and asked more specific questions about feasibility (for example, time of day, age, length of session).

In addition, participants were asked to rate the proposed Branching Out model according to appropriateness, acceptability, and feasibility using the AIM, IAM, and FIM (Weiner et al., 2017). Each measure consists of four statements or Likert items and participants indicated to what extent they agreed with each statement on a five point Likert scale from 'strongly disagree' to 'strongly agree'. Example statements included: The Community Artscapers programme would work in our school (feasibility); We would implement Community Artscapers in our school (acceptability); The proposed implementation plan would work in our school (appropriateness).

Round one was open from 25 April to 25 May 2022 and all research team and Advisory Group members promoted the survey through relevant networks during this time. The link to the online survey was sent out via email and social media and those who were interested in taking part were required to read the participant information and respond to mandatory consent questions before entering the survey.

Round one analysis

When round one of the survey closed, the data was exported to Excel for analysis. The first author led the analysis to determine the questions for round two, supported by the wider research team.

For each of the Likert items, if more than 50% of respondents agreed or strongly agreed then the item was automatically included in the next round of the survey. If any of the items had responses that were equivocal with a high proportion of neutral responses the Advisory Group decided whether the item should be included as an option in the next round, considering the number of disagree/strongly disagree responses. For the implementation outcome measures the total score for each item (acceptability, appropriateness, and feasibility) was calculated by assigning a numerical value to the options (strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5) as described by Weiner et al. (2017). The four items contributing to each scale were then added together to form a total score for each scale and the mean score calculated. In addition, following Hong et al. (2019), an agreement index was calculated, where for each of the implementation outcomes (AIM, IAM, and FIM) the number of participants rating criteria as 4 or 5 (agree or strongly agree) and whose total score for the dimension was 16 or above was divided by the total number of participants to provide an agreement index. For each of these measures, consensus was considered achieved if the agreement index was $\geq$ 0.8. The open responses provided by the participants were analysed using thematic analysis and reviewed by the wider research team.

Insights from both the closed and open responses were then shared and discussed with the Advisory Group during an online workshop, who helped to determine whether participants had suggested changes which could be incorporated into the model and what to include in round two.

Round two

If consensus had been reached with no suggested changes, the Delphi process would have stopped at that point. However, following analysis of the first round, a second round of the survey was developed and shared with those participants who provided email addresses, and circulated via the same recruitment channels as for the first round to maximise the reach of the survey. Round two was open for a longer period from 8 June to 31 August 2022 to encourage greater participation and all research team and Advisory Group members further promoted the survey to relevant networks during this time.

The second round asked those who had not participated in the first round about their school context and the acceptability, appropriateness, and feasibility of Branching Out model using the same Likert scales. It then asked all participants further questions derived from the first round about how the model might complement the curriculum and existing initiatives, as well as the appropriateness and feasibility of more specific options for delivery in their school. These questions used a numerical rating scale of 1-9 where one is the lowest and nine the highest score to provide a finer grading of the different elements. As with the first round, participants were asked to rate the proposed Branching Out model overall according to appropriateness, acceptability, and feasibility using the AIM, IAM, and FIM (Weiner et al., 2017), with the same implementation outcomes measures scoring.

Round two used the same process of data analysis as for round one, but for the questions relating to model delivery where the scoring was 1-9, the criteria to include the domain in the final model depended on more than 70% of participants scoring it between 7 and 9.

Results

Round one

Recruitment for the e-Delphi study entailed using social media (Twitter) and snowball sampling and contacting a range of different networks and organisations (a total of 65). However, many of the networks and organisations were only contactable using the 'Enquiries' form on the webpages so it is not possible to know whether these groups accessed the information about the survey or sent it out to their members. After a four-week period the total number of respondents for the first round was 16. We gathered some demographic data on respondents including role within the school and length of time working in a school setting. The length of time working in a school setting ranged from 2 years 8 months to 30 years. Respondents indicated the roles that they held within their school (they could select multiple options), and the sample included seven Teachers, three Headteachers and three Deputy/Assistant Headteachers, four Designated Safeguarding Leads (DSL), two Special Education Needs and Disabilities Co-ordinators (SENCO), four Subject Specialists (e.g. Arts Lead), two Teaching Assistants, and two 'other'. In the following sections the quantitative data from the implementation measures is initially presented followed by the data from the questions which contributed to the development of the model. Table 1 presents the round one responses to the AIM, IAM, and FIM on the five point scale from 'completely disagree' to 'completely agree' (please note that the percentages in all tables are calculated based on the number of participants who responded to that specific question).

The first questions were asked to determine participants initial responses to the acceptability of arts-in-nature practice (as defined by the Eco-Capabilities project) in schools. All participants agreed or strongly agreed with each of the statements on the Acceptability of Intervention Measure (AIM), except for one participant who neither agreed or disagreed with the statement 'I welcome Eco-Capabilities'. The range of scores for total acceptability was 15-20 with the mean score of 18.63 and an agreement index for the acceptability domain of 0.94, which indicates consensus was reached. We asked respondents about the appropriateness of arts-in-nature practice in their schools and for the overall Intervention Appropriateness Measure (IAM) all participants agreed or strongly agreed with each statement, except for two participants who neither agreed or disagreed with all four statements in one case and two statements in the other. The range of scores for total appropriateness was 12-20 with the mean score of 18.25 and an agreement index for the appropriateness domain of 0.87, which indicates consensus of over 80% was reached. Respondents were asked to consider the feasibility of the Branching Out model to engage more children in arts-in-nature experiences delivered by volunteers as Community Artscapers

Table 1. Round one acceptability, appropriateness, and feasibility.

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Please indicate how you feel about the acceptability of a project such as Eco-Capabilities for children in schools.					
Eco-capabilities practice meets my approval	0	0	0	5 (31.3%)	11 (68.8%)
Eco-capabilities is appealing to me	0	0	0	5 (31.3%)	11 (68.8%)
I like the idea of Eco-capabilities	0	0	0	5 (31.3%)	11 (68.8%)
I welcome Eco-capabilities	0	0	1 (6.3%)	5 (31.3%)	10 (62.5%)
Please indicate how you feel about the appropriateness of arts in nature experiences – described as artscaping – for your children and your school.					
Artscaping seems fitting	0	0	2 (12.5%)	4 (25%)	10 (62.4%)
Artscaping seems suitable	0	0	1 (60.3%)	5 (31.3%)	10 (62.5%)
Artscaping seems applicable	0	0	1 (6.3%)	5 (31.3%)	10 (62.5%)
Artscaping seems like a good match	0	0	2 (12.5%)	2 (12.5%)	12 (75%)
Please indicate how you feel about the feasibility of Branching Out to engage more children in arts in nature experiences delivered by volunteers as Community Artscapers.					
Branching Out seems implementable	0	0	0	9 (60%)	6 (40%)
Branching Out seems possible	0	0	1 (6.3%)	7 (43.8%)	8 (50%)
Branching Out seems doable	0	0	1 (6.3%)	7 (46.7%)	7 (46.7%)
Branching Out seems easy to use	0	1 (6.3%)	4 (26.7%)	5 (33.3%)	5 (33.3%)

in their schools. The range of scores for the total feasibility was 13-20 with a mean score of 17. However, the agreement index for the overall Feasibility of Intervention Measure (FIM) was 0.6, indicating consensus was not reached. This was the result of 40% of participants who either disagreed or neither agreed or disagreed with the statement 'Branching Out seems easy to use'. This is somewhat understandable given the Branching Out model is in the early stages of development. Nonetheless the other two domains reached high levels of consensus and the responses to the open questions were very positive about the proposed project. For example:

> I think that the children would respond in a positive way and this experience would be a great addition to their lived experience.

> I think they would love the chance to explore and deepens their relationship with nature.

> They would LOVE it.

Respondents were asked to rate the degree to which different children would benefit from taking part in Branching Out. All 16 respondents thought children with special educational needs or disability (SEND), adverse childhood experiences (ACE), English as an additional language (EAL), or those with anxiety and/or depression would benefit 'a lot' or 'significantly' from artscaping. Two people were unsure if children who had the Pupil Premium (PP) designation would benefit although the remaining respondents thought they would 'a lot' or 'significantly'. Responses regarding the benefits to marginalised groups were also favourable with 80% indicating that the children would benefit from the activity. It is noteworthy that all the respondents felt that there would be some benefits to taking part for all the named groups. Key Stages 1 and 2 achieved similar levels of consensus with over 80% agreeing that artscaping with volunteers would work with Key Stage 1 children, and 87% agreeing that artscaping with volunteers would work with Key Stage 2 children.

In terms of who would be the most appropriate person to champion Branching Out in school only two respondents selected the Headteacher, while three selected the Deputy Head. No respondents thought a Head of School or Deputy Head of School would be suitable, though six (40%) selected non-applicable (these options were included based on feedback from the Advisory Group). As fewer than 50% 'agreed' or 'strongly agreed' that these roles would be appropriate champions, these senior roles were removed from the second round of the survey, leaving 'Teacher' 'SEND Co-Ordinator (SENCO)', 'Designated Safeguarding Lead (DSL)' and 'Subject Lead' as options.

Because the Branching Out model was looking at the feasibility of using community volunteers to deliver arts-in-nature practice in school we provided four possible options as to how this could work: volunteers working alongside school staff with the whole class, volunteers working alongside school staff with half the class, volunteers working alongside school staff with small groups, or volunteers working on their own with small groups (with oversight from school staff). The scenario which was most popular with all the respondents agreeing or strongly agreeing was for volunteers to work alongside school staff with small groups. The least popular option with fewer than 50% agreeing was volunteers working on their own with small groups; therefore, this was not included in round two of the survey.

Respondents were asked about the length of time that should be allocated for arts-in-nature practice in school and there was a spread of responses across the options provided. Fewer than 50% of participants agreed or completely agreed with the following time allocations: 1.5 hours per week, 2 hours per week, 2.5 hours per fortnight, and 2.5 hours per month. Therefore, the times taken forward to round two were 1 hour per week, 2 hours per fortnight, and 3 hours per month. Afternoons were the most popular option with 93% agreeing or completely agreeing afternoons would be an appropriate time for the activity to take place. The after-school delivery was also included as an option in round two because over 30% were equivocal and neither agreed nor disagreed with this as an option so the Advisory Group decided to take it forward.

The data analysis of the round one survey and discussions of the results with the Advisory Group helped in refining the Branching Out model and round two of the survey.

Round two

In total there were 30 responses to the second round of the survey, using the same recruitment process as for round one. Only four people who had completed the first round also completed the second round meaning the total sample size for the e-Delphi study was 42. Respondents indicated the roles that they held within their school (they could select could multiple options), which included ten Teachers, five Headteachers and five Deputy/Assistant Headteachers, five DSLs, three SENCOs, three Subject Specialists (e.g. Arts Lead), two Teaching Assistants, one Inclusion Manager, one Pastoral Support, one Reading Tutor, one Cognitive and Art Psychotherapist HCPC, and one Early Career Teacher with previous experience as a Teaching Assistant. The length of time working in a school setting ranged from just 2 months to 31 years.

Table 2 presents the round two responses to the AIM, IAM, and FIM on the five point scale from 'completely disagree' to 'completely agree'.

Using the Acceptability of Intervention Measure (AIM) we asked respondents whether the use of volunteers to deliver artscaping would be acceptable in their school. There was strong support for this from the majority with all but two of the respondents agreeing or strongly agreeing with all statements (Branching Out meets with my approval, is appealing to me, I like the idea, and I welcome Branching Out). The mean score on the Likert scale for AIM was 17.6 and the agreement index was 0.83 demonstrating consensus. Although the two respondents who disagreed strongly disagreed with all statements, in their open responses to the question 'How do you think children in your school would respond to artscaping delivered by volunteers', one responded *'sounds good'* whilst the other replied *'I think they would be inspired and engaged'*.

Participants were then asked about the appropriateness of volunteers delivering Branching Out in their school using the Intervention Appropriateness Measure (IAM). The four Likert items contributing to

Table 2. Round two acceptability, appropriateness, and feasibility

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Please indicate how you feel about the acceptability of Branching Out to deliver artscaping through volunteers as Community Artscapers for the children in your primary school.					
Branching Out meets my approval	2 (7.1%)	0	0	11 (39.3%)	15 (53.6%)
Branching Out is appealing to me	2 (6.9%)	0	0	7 (24.1%)	20 (69%)
I like the idea of Branching Out	2 (6.9%)	0	0	9 (31%)	18 (62.1%)
I welcome Branching Out	2 (6.7%)	0	0	10 (33.3%)	18 (60%)
Please indicate how you feel about the appropriateness of Branching Out to deliver artscaping through volunteers as Community Artscapers for the children in your primary school.					
Branching Out seems fitting	2 (6.9%)	0	1 (3.4%)	13 (44.8%)	13 (44.8%)
Branching Out seems suitable	2 (6.9%)	0	1 (3.4%)	13 (44.8%)	13 (44.8%)
Branching Out seems applicable	2 (6.9%)	0	1 (3.4%)	12 (41.4%)	14 (48.3%)
Branching Out seems like a good match	2 (6.7%)	0	1 (3.3%)	14 (46.7%)	13 (43.3%)
Please indicate how you feel about the feasibility of Branching Out to deliver artscaping through volunteers as Community Artscapers for the children in your primary school.					
Branching Out seems implementable	2 (6.9%)	0	2 (6.9%)	15 (51.7%)	10 (34.5%)
Branching Out seems possible	2 (6.7%)	0	1 (3.3 %)	16 (53.3%)	11 (36.7%)
Branching Out seems doable	2 (6.9%)	0	1 (3.4%)	16 (55.2%)	10 (34.5%)
Branching Out seems easy to use	2 (6.9%)	0	5 (17.2%)	13 (44.8%)	9 (31%)

this scale were: Branching Out seems fitting, suitable, applicable, and a good match. As with the AIM scale the same two respondents strongly disagreed with all statements and there was one person who neither agreed or disagreed on the four statements. Despite this, there were strong levels of support on each of these items with a mean score of 16.9 on the IAM scale and an agreement index of 0.83.

The Feasibility of Intervention Measure (FIM) was used to assess how feasible respondents felt it would be to use volunteers as Community Artscapers to deliver arts-in-nature practice in their school. The four statements contributing to this scale were: Branching Out seems implementable, possible, doable, and easy to use. The mean score for the FIM scale was 16.2 and the agreement index was 0.73. For this measure the same two respondents strongly disagreed with the four items, there were also respondents who neither agreed nor disagreed that Branching Out seems easy to use. As a result, 80% consensus was not reached.

Participants were asked to rate on a scale of 1-9 (where one is least and nine is the most) the appropriateness of different groups of children to take part in arts-in-nature practice. The following groups were considered: children with SEND, ACE, PP, anxiety and depression, EAL, and other marginalised groups. The mean score across the different groups was over 7, and over 90% of respondents scored the groups of ACE, SEND, PP and those with anxiety and depression between 7 and 9 as being appropriate recipients of artscaping. Respondents were asked to consider whether artscaping would be feasible with Key Stage 1 children and Key Stage 2 children, both achieved a mean score over 8 (8.3 and 8.4 respectively) with over 90% rating them between 7 and 9. For all these domains, more than 70% of participants scored them between 7 and 9 meaning consensus was reached and they could all be included in the final model.

Artscaping could take place at different times of the school day, for different lengths of time; in addition, the delivery could be managed by volunteers working on their own with small groups, with school staff and the whole class, or with school staff and small groups of children. Following the first round of the Delphi survey the option for volunteers to work on their own with small groups of children was removed as it did not achieve consensus. In round two, over 70% of respondents scored the feasibility of volunteers working with school staff and the whole class or a small group between 7 and 9 in each case. However, fewer than 60% of respondents thought it would be feasible for volunteers to work with school staff and half the class. This option was therefore not included in the final model.

In terms of the best time of day there was universal support for the sessions to take place weekly in the afternoon for one hour with over 85% of respondents scoring this option between 7 and 9 and a mean score of 7.9. The after-school option was particularly unpopular with fewer than 20% of respondents scoring either of the afterschool options between 7 and 9 and mean scores of 3.6 and 3.1.

It is often recommended that introducing new interventions or innovations requires a champion to support the idea and drive it forward. Following the first Delphi round the following roles were identified as the most appropriate champions for artscaping: SENCO, Designated Safeguarding Leads, Teachers, and Subject Specialists. In round two Teachers and Subject Specialist (e.g. Arts Leads) both achieved over 70% of respondents scoring them between 7 and 9 with mean scores of 7.0 and 7.6 respectively.

Finally, participants were asked how acceptable, appropriate, and feasible Branching Out would be for their school on a scale of 1-9. This is presented in Table 3.

Both acceptability and appropriateness were rated between 7-9 by over 95% of the respondents with mean scores of 8.3 and 8.4 respectively. Feasibility achieved a mean score of 7.8 with just under 90% scoring it between 7-9. Overall, the agreement index for acceptability, appropriateness, and feasibility were 1, 0.96 and 0.93 indicting a high degree of consensus with the concept of the Branching Out model, as presented.

Discussion

This modified e-Delphi study involved primary school staff and aimed to support the development of the Branching Out model that mobilises volunteers as community assets to enable the wider implementation and scaling-up of arts-in-nature practice with children. The survey was developed using interview data from teachers and artists who had been involved in delivering the Eco-Capabilities arts-in-nature

Table 3. Overall acceptability, appropriateness, and feasibility of Branching Out

On a scale of 1-9, how acceptable, appropriate, and feasibly do you think Branching Out is overall for your school context?									
Statements	1	2	3	4	5	6	7	8	9
How acceptable would Branching Out be for your school	0	0	0	0	0	1 (3.3%)	7 (23.3%)	4 (13.3%)	18 (60%)
How appropriate would Branching Out be for your school	0	0	0	1 (3.6%)	0	0	5 (17.9%)	3 (10.7%)	19 (67.9%)
How feasible would Branching Out be for your school	0	0	0	0	3 (10.3%)	0	10 (34.5%)	3 (10.3%)	13 (44.8%)

practice in schools previously. An Advisory Group with relevant knowledge and interest in the project also provided input into the development of the survey. The e-Delphi study allowed participants to reflect on how a realistic model of the Branching Out arts-in-nature practice could operate in their own schools.

The data from the e-Delphi study provided a useful contribution to the refinement of the Branching Out model of delivery with the following aspects of the model achieving consensus: Branching Out using volunteers as Community Artscapers was considered suitable for both Key Stage 1 and Key Stage 2 children, with consensus that children with SEND, ACE, PP, anxiety and depression, and EAL, as well as marginalised groups, could benefit from the practice. Teachers or Subject Specialists were considered the most appropriate person to champion the intervention within the school. The concept of Branching Out is to mobilise community assets to support children's mental health and wellbeing in schools, engaging children with nature and using volunteers to support the work. There was consensus that it was appropriate for volunteers to be involved in this way and the preferred option was that they should work with school staff in small groups or with the whole class. Finally, the preferred option as to when and how long the arts-in-nature practice should take place was weekly for one hour in the afternoon.

These findings are important given the critical situation of children and young people's mental health (National Health Service (NHS), 2020; NHS Confederation, 2021) and the potential of arts-in-nature practice in primary schools to enhance mental health (Walshe et al., 2020, 2022), as set out in the introduction. However, this potential can only be realised with appropriate resourcing for sustainability and support from staff in schools (Hepburn, 2018). Accordingly, finding that arts-in-nature practice supported by volunteers as Community Artscapers was considered both acceptable and appropriate, and refining the feasibility of delivery for a range of primary school contexts, will strengthen the Branching Out model overall. The e-Delphi method was crucial in facilitating this outcome by specifically engaging with primary school staff to reach consensus.

There are acknowledged limitations to the research. For example, despite repeated efforts to recruit more participants to the study we were unable to do so within the limits of the research funding timeframe. It was difficult to identify staff in specific roles such as SEND or Mental Health Leads across schools; in addition, we have no way of knowing whether the organisations we contacted and asked to distribute the survey to their members did so. It is, therefore, not possible to know the response rate to the survey or how many school staff who were sent the survey chose not to respond. It is recognised that since the pandemic, schools and teachers are under increasing pressures and school staff receive many emails which could mean that they prioritise emails which directly relate to their own work, such as those from parents and senior management in the school. It is also accepted that those who did participate would have done so because they had a particular interest in the subject area. However, Delphi studies are designed to reach consensus between a group of experts and are not trying to reach a representative sample in the traditional sense of survey data collection. To overcome difficulties in recruitment to such surveys, it would be useful if a database of staff working in a range of roles in schools interested in contributing to the wider development of policy and practice could be established. Although logistically difficult to set up, it would be rewarding for staff to know they had a voice in the delivery and development of school-based interventions and would help to ensure that new innovations could be implemented effectively to support both children and staff. Furthermore, whilst this e-Delphi study used online surveys to gather the data, it is also possible to gather data through other online platforms, including a 'live' process in a meeting situation or at a conference. This could either be online or

face-to-face with participants voting for different options using digital devices, including smart phones. It is also possible to use an invited group of named experts to contribute to the consensus process; again, this can be face-to-face during an in-person event on during an online meeting.

Indeed, despite the limitations of recruitment in the current study, together with the findings from the pilot in six schools, the Branching Out model has been further developed and strengthened. After discussions with the Stakeholder Group, it is now being introduced into other school settings in the East of England.

Conclusion

This research project was based on the principles of implementation science, aiming to establish the acceptability, feasibility, and appropriateness of a new model of delivery of an existing intervention, arts-in-nature practice in schools. As stated in the introduction, previous research had already demonstrated the effectiveness and impact of arts-in-nature practice for primary school children delivered by visiting artists. To increase the opportunities for more children to benefit from this practice, it was necessary to develop a new model of delivery which mobilised existing community assets, community volunteers. Successful implementation of an intervention requires support from those who will be impacted by its introduction and therefore the overall research project was designed to capture the views of a wide range of stakeholders; this included teachers and school leaders, as well as representatives from the Local Authority, children's mental health services within the local NHS Trust, and third sector organisations.

The e-Delphi study reported here reached out to school staff from across England to investigate the acceptability, appropriateness, and feasibility of different forms of delivery of the intervention, which to date had only been piloted in the eastern region of the country. Delphi studies are used increasingly in health and social care to develop policy guidelines and research priorities; however, comprehensive searching of the existing literature indicates that they do not appear to be a commonly used method in education research. Based on the findings and discussion, we suggest that they have the potential to be a valuable addition to the data collection method arsenal for education as they enable the collation of expert input into policy and practice development and consensus to be reached regarding priorities for implementation. However, it would be beneficial to establish a national network of educators who are keen to contribute to the development of evidence-based interventions given the issues discussed around recruitment.

This e-Delphi study established consensus around the acceptability, appropriateness, and feasibility of the Branching Out model of delivering arts-in-nature practice – Artscaping – by using volunteers as Community Artscapers in primary schools. The specifics around how it would work best based on these findings informed the further development of the Branching Out model and may be useful to practitioners in schools, as well as arts and voluntary organisations in taking this forward into practice.

Disclosure statement

There are no conflicts of interests to declare.

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About the Authors

Dr Hilary Bungay is Professor of Arts Health and Wellbeing in the Faculty of Health Education Medicine and Social Care at Anglia Ruskin University. Her main research focus is the developing area of Arts, Health, and Wellbeing and recent projects include: exploring the impact of participatory arts on social relationships for older people in residential care settings, collaborative working between artist and care home staff, the impact of a museum-based arts activities on loneliness and older people, and most recently a project looking at how 'arts in nature' practice with children can be scaled up and implemented more widely using community volunteers in schools.

Dr Nicola Walshe is Professor of Education, Pro-Director for Education at IOE, UCL's Institute for Education and Society, and Executive Director of the UCL Centre for Climate Change and Sustainability Education. Her research is

predominantly in the field of high-quality teacher education practices in climate change and environmental and sustainability education; her recent AHRC-funded projects, Eco-Capabilities and Branching Out, explore the process by which arts-in-nature practice supports children's connection with the environment and, thereby, their wellbeing. Nicola is co-convenor of the Environmental and Sustainability Education Research network of European Educational Research Association and a UCL Climate Hub Community Expert.

Dr Anna Dadswell is a Research Fellow in Social Work and Social Policy in the Faculty of Health Education Medicine and Social Care at Anglia Ruskin University. Her research interests include the impact of arts, culture, and social participation on mental health and wellbeing, particularly for marginalised communities and using creative and inclusive methodologies. She has worked closely with Professor Hilary Bungay on research into participatory arts in residential care settings and with both Professor Nicola Walshe and Professor Hilary Bungay on the research into scaling up 'arts in nature' practice with children in schools through mobilising community volunteers.

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