

REPORT SERIES: NEURODIVERSITY IN MAINSTREAM SCHOOLS

Bridging Worlds

BLENDING ORGANIC & CO-CREATED DIGITAL ENVIRONMENTS
TO SUPPORT NEURODIVERGENT YOUNG PEOPLE
IN MAINSTREAM EDUCATION

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Executive summary

Bridging Worlds explored how blended outdoor and digital environments can support neurodivergent young people at risk of exclusion or disengagement in mainstream education. Delivered in partnership with Plymouth City Council's Poole Farm and Youth Service, the project combined conservation activities in a real-world setting with creative engagement in a custom-built Minecraft world. Guided by the National Youth Work Curriculum and Digital Youth Work Standards, the approach was grounded in neuroaffirmative principles, valuing lived experience and positioning young people as active contributors.

Thirty neurodivergent young people aged 13–15 participated in six weekly half-day sessions across two school terms. Activities were iterative and participant-driven, supported by youth workers, conservation staff, neurodivergent researchers, teachers and volunteers. Data were generated through observation, reflective discussions, creative digital artefacts and informal interviews, and analysed using qualitative methods.

Key findings highlight the importance of inclusive, relational and flexible learning environments and the benefits of using a youth work approach. Five themes emerged:

- **Social and relational approaches:** Shared meals and collaborative activities fostered trust, belonging and friendship, contrasting with isolation often experienced in school.
- **Energy and focus:** Participants articulated challenges with classroom norms requiring stillness and silence. Outdoor and digital activities enabled movement, sensory engagement and active learning.
- **Space and wellbeing:** Access to indoor and outdoor spaces provided autonomy, emotional safety and opportunities for mindfulness.

- **Discovering and building:** Exploratory activities led to moments of pride and achievement, from finding new beaver dams to creating custom Minecraft resources. Movement between organic and digital worlds sparked creativity and confidence.
- **Impact in school and community:** The project demonstrated positive impacts beyond the sessions. School staff observed improved behaviour and engagement, while young people reported feeling more confident and connected.

These outcomes suggest that blending outdoor and digital spaces can act as a catalyst for inclusion and wellbeing.

Policy and practice implications include:

- adopting the neurodiversity paradigm in education policy, shifting from deficit-based to strengths-based approaches
- expanding non-formal learning spaces and legitimising creative digital platforms as tools for learning and advocacy
- investing in professional development for inclusive, participatory practice and cross-sector collaboration.

While the study's small, localised sample and short timeframe limit generalisability, findings offer valuable insights for educators, youth workers and policymakers. Future work will focus on resource development, practitioner training and exploring long-term impacts. Dissemination is under way through podcasts, blogs, conferences and publications to ensure these insights inform inclusive education and youth work practice.

1. Introduction

Neurodivergent young people continue to face disproportionate risks of exclusion and disengagement within mainstream education. Fielding et al. (2025) highlight that attendance difficulties and school distress disproportionately affect neurodivergent young people, often because of unmet needs and lack of inclusive practices (Connolly et al., 2023). Although recognition of neurodiversity as a natural and valuable form of human variation is increasing, educational environments frequently privilege narrow norms of behaviour, communication and learning. These norms create barriers for young people whose ways of thinking and interacting differ from dominant expectations. According to The Donaldson Trust (2026), around 15 per cent of the population may be neurodivergent, highlighting the urgency of this issue. While research has begun to explore neuroinclusive approaches in mainstream schooling, little attention has been given to the role of youth work in improving neurodivergent experiences.

Bridging Worlds was developed in response to this context, exploring how youth work and outdoor learning in organic and co-created digital environments might support neurodivergent young people at risk of exclusion or disengagement. The project was guided by the National Youth Work Curriculum (NYA, 2025a), a flexible framework supporting personal, social and political development through relationships, learning and inclusion, underpinned by education, empowerment, equality and participation. Digital Youth Work Standards (NYA, 2025b) further informed activities, ensuring ethical and inclusive engagement in digital spaces. We adopted a neuroaffirmative stance, recognising both challenges that neurodivergent young people face within existing systems and strengths, creativity and perspectives they bring (Milton et al., 2020; Harkness, 2025). The neurodiverse project team is committed to valuing lived experience through collaborative processes, positioning neurodivergent people as equal partners rather than passive subjects (Jones, 2021).

The work brought together youth work, outdoor learning, conservation practice and creative digital co-production using Minecraft. Designed and led by neurodivergent researchers and practitioners, the project was supported by volunteers, including undergraduate and postgraduate students. School staff attended sessions to support activities

and provide one-to-one assistance where needed, enabling a holistic approach drawing on expertise across education, youth work and conservation. Open discussions about neurodivergence were encouraged among participants and team members, reinforcing a commitment to neuroaffirmative and inclusive research practice.

The project was delivered in partnership with Plymouth City Council's Poole Farm and Youth Service. Poole Farm is described as a space where 'learning and wellbeing through nature' support people to thrive (PCC, 2025). This formed the project's organic, outdoor learning environment. While outdoor learning is increasingly recognised as valuable for inclusion, limited attention has been paid to neurodiversity in these spaces. For example, Anderson et al. (2021) highlight equity issues in outdoor learning but make minimal reference to neurodiversity and none to neurodivergence.

Alongside outdoor activity, participants worked in a custom-built Minecraft world modelled on Poole Farm, allowing them to creatively reimagine the site and co-create digital representations of conservation practices. Moving between outdoor experiential learning and digital co-creation enabled inclusive spaces where neurodivergent young people could develop skills, pursue interests and communicate needs beyond the constraints of traditional classrooms.

Bridging Worlds was designed as an exploratory, practice-based project rather than a fixed intervention. Activities evolved in response to participants' interests and feedback, with young people shaping session content and the digital environments they created. Minecraft functioned as an engagement tool and a reflective space, where participants expressed ideas through in-game text, structures and narratives. Kilmer et al. (2023) suggest Minecraft can act as a therapeutic social scaffold for neurodivergent youth. Black et al. (2025, p. 1689) similarly emphasise the neuroaffirmative potential of Minecraft-based 'gaming therapy'.

Building on earlier pilot phases in Salford (2023) and Plymouth (2024), which indicated strong engagement from neurodivergent young people, *Bridging Worlds* focuses explicitly on mainstream education, centring advocacy, voice and co-creation. This report documents the project's design, delivery and learning, contributing to wider discussions about how youth work and education might better recognise and value neurodivergent ways of learning and being.

2. Research design & methodological approach

The research design was shaped by three core commitments: (1) a neuroaffirmative stance grounded in the neurodiversity paradigm (Milton et al., 2020); (2) youth work pedagogy emphasising participation, empowerment and relational learning (NYA, 2025a); and (3) creative, practice-based inquiry (Hayes et al., in press) that recognises learning as embodied, social and situated.

Bridging Worlds adopted an iterative, exploratory and responsive design based on three clear objectives:

1. supporting neurodiversity through recognising and promoting the preferences, needs and capabilities of neurodivergent young people
2. encouraging advocacy and voice by enabling young people to identify and communicate their needs in mainstream education settings
3. co-creating learning resources through working with neurodivergent young people to produce guidance for teachers and youth workers.

Research activities, methods and analytical emphases were refined throughout the project in dialogue with participants, practitioners and emerging insights. This approach reflects participatory action research traditions and qualitative practitioner research in education, positioning the research process itself as a site of learning, reflection and change.

2.1 CONCEPTUAL & METHODOLOGICAL FRAMEWORK

As the research design is underpinned by the neurodiversity paradigm, barriers to learning were understood as arising primarily from environments, systems and pedagogical norms that privilege a narrow range of ways of thinking, communicating and behaving. Consequently, the project focused on adapting learning environments and practices through reflexive practice, rather than seeking to modify or normalise young people.

Methodologically, the project draws on participatory, qualitative and ethnographic approaches, and youth work practitioner research, foregrounding participant voice and recognising knowledge as co-produced through relationships. Neurodivergent young people were positioned as active contributors whose insights shaped activities, interpretations and outputs.

The research was also informed by theories from outdoor learning and environmental education, particularly Cornell's concept of 'Flow Learning' (Cornell, 2021), which emphasises experiential progression through curiosity, immersion, reflection and meaning-making, and the 'Pathways to Nature Connectedness' framework (Richardson et al., 2022), which supports interpretation of how learning, wellbeing and connection to place are experienced and articulated by participants.

2.2 RESEARCH CONTEXT & LEARNING ENVIRONMENTS

Research activities took place across two interconnected learning environments:

1. Poole Farm, a Plymouth City Council community farm providing an indoor–outdoor educational setting that includes woodland, conservation areas and community facilities. This site functioned as the project's 'organic world', enabling embodied, sensory and relational engagement with nature, wildlife and conservation practices.
2. A custom-built Minecraft world, modelled on Poole Farm and collaboratively modified with participants. This 'digital world' provided a creative, flexible space for experimentation, storytelling and imaginative reworking of the physical site.

Members of the research team, including the resident therapy dog, were added to the Minecraft world as interactive 'non-player characters'. Young people created 'mods' (custom items), including 'skins'

(character textures) and ‘mobs’ (virtual animals) to enhance gameplay and mirror aspects of the real Poole Farm.

Young people’s learning was not treated as confined to either outdoor or digital spaces; instead, participants were encouraged to notice, reflect on and reimagine relationships between self, others and the more-than-human world across contexts. This dual-site design enabled participants to communicate understanding, emotion and meaning through multiple modes, including physical activity, digital building, play and narrative.

2.3 PARTICIPANTS & RECRUITMENT

The primary participants were 30 neurodivergent young people aged 13–15, all enrolled in mainstream education and identified by their school as being at risk of exclusion or disengagement. Participants were recruited through the Youth Service in collaboration with a local school (not named to protect anonymity) and Poole Farm, following established safeguarding and consent procedures.

Participants were organised into three groups, each attending six weekly half-day sessions across two school terms. Group sizes were intentionally small (up to 10 participants per session) to support flexibility, relational safety and individual choice. Attendance varied across sessions due to factors such as illness, family commitments or school-related circumstances, reflecting the lived realities of participants’ lives.

Teaching staff were asked to identify young people who were neurodivergent – either with a diagnosis or in the process of getting one – and who were struggling in school. The first group were all males, and we subsequently requested a more even gender mix.

In addition to young people, the research involved:

- youth workers and conservation staff supporting delivery and safeguarding
- neurodivergent academic researchers and early-career researchers
- university students and apprentices acting as co-researchers
- school staff who contributed contextual reflections on young people’s engagement and experiences.

2.4 ETHICAL CONSIDERATIONS

Ethical approval for the research was obtained through Plymouth Marjon’s review processes, and the study was conducted in accordance with BERA’s *Ethical Guidelines for Educational Research* (BERA, 2024), guided by BERA’s statement on close-to-practice research (BERA, 2018) and the Youth Work Code of Ethics (NYA, 2025c). Ethics were approached as an ongoing, relational practice rather than a procedural requirement completed at the outset.

Key ethical principles included:

- Informed, voluntary and ongoing consent, with clear differentiation between participation in project activities and participation in research. Consent was discussed at each session to ensure they understood – and remembered – what this involved, and parental/guardian consent and young person assent, in line with local authority and institutional safeguarding requirements. Young people were able to opt out of research-related data collection without detriment to their participation in activities.
- Neuroaffirmative practice, avoiding deficit-based language and prioritising environmental and relational adaptation.
- Safeguarding and emotional wellbeing, with trained youth workers present at all sessions and clear protocols for responding to distress, withdrawal or additional support needs.
- Confidentiality and data protection, including anonymisation and secure handling of qualitative, visual and digital data. Given the participatory and creative nature of the research, particular attention was paid to relational ethics, trust and respect for participants’ emotional attachments to both physical and digital creations.

2.5 RESEARCH METHODS, DATA GENERATION & ANALYSIS

The project employed a qualitative, multi-method approach designed to capture the complexity of participants’ experiences across organic and digital environments. Data were generated through the following methods:

- participant observation and ethnographic fieldnotes, recorded by researchers and practitioners during and following each session, capturing interactions, activities and contextual factors

- reflective group discussions at the end of sessions, using open-ended prompts to explore what young people had learned, enjoyed, found challenging or wished to change – this enabled us to ensure activities were young person-directed: we planned the following week's activities with them
- informal conversational interviews with young people near the beginning and end of their participation, focusing on experiences of learning, school and self-advocacy
- creative digital artefacts produced within Minecraft, including builds, modifications (mods), textual inscriptions (such as signs and books) and interactions with non-player characters
- practitioner and researcher reflections, drawing on professional expertise and reflexive practice.

This multi-method approach recognised that neurodivergent young people may communicate insight, emotion and understanding through action, play, design or story, rather than through formal verbal or written accounts alone. This helped us build a picture, enabling us to understand why some neurodivergent young people struggle in school.

Data analysis followed an inductive, interpretive and reflexive process, consistent with qualitative participatory research. Analysis involved iterative engagement with data; analytical processes included regular team reflective meetings to share observations, identify emerging patterns and tensions, and agree key themes. This enabled cross-reading of observational, conversational and creative data to explore relationships between learning, wellbeing and environment. The use of sensitising concepts, including 'flow learning' and 'pathways to nature connectedness', supported interpretation without constraining meaning. The research team also employed narrative and storied forms of analysis, re-presenting empirical material as tales (Hayes & Prince, 2019), which have been shared in conference presentations and outputs (see section 4.4 'Dissemination of findings'). This approach preserved context, relational dynamics and emotional nuance, foregrounding moments of noticing, disruption and connection that may be obscured by conventional thematic coding.

2.6 TIMELINE & ITERATIVE DEVELOPMENT

Fieldwork was conducted between February and July 2025, with analysis, co-creation of resources and dissemination activities continuing through to September 2025. Delivery across three participant groups enabled learning from early sessions to inform adaptations in later groups, including adjustments to facilitation approaches, pacing and activity design. During weekly reflection and planning sessions, we ensured that we were recognising the needs of young people. In doing so, we often noticed different preferences and capabilities from what was set out in student profiles provided by the school, highlighting differences between the school and project environments in the behaviours and interactions of young people. These conversations also informed our planning of further activities with the group. Through this iterative process, we ensured that the research remained responsive to participant needs and experiences, and that methodological decisions were grounded in practice rather than imposed in advance.

3. Findings & discussion

Although this final report is written by the project's co-leads, it is a multivocal report, drawing on participants' words to ensure their voices are heard and advocating on behalf of the whole team of adults and young people. To respect anonymity and privacy, like Cumming et al. (2026), we chose to use the terms 'young person', 'project team member', 'ranger', 'teaching staff' and so on, and the pronouns 'they/ them' to refer to specific quotations or points, without specifying which group/session they came from. Analysis of data from weekly sessions (see section 2.5) across the three groups revealed five main themes:

1. social and relational approaches
2. energy and focus
3. space and wellbeing
4. discovering and building
5. impact in school and community.

The findings demonstrate the urgent need for more inclusive practices to engage neurodivergent young people in creative and hopeful ways.

3.1 SOCIAL & RELATIONAL APPROACHES

We originally planned to approach different schools for each group; however, to respect the commitment from the first school and the developing relationship with staff, we decided to stay with this school. Each half-day session started with a communal meal (for instance, bacon rolls for breakfast; jacket potatoes with cheese and beans for lunch), which supported social interaction and team building, and enabled the project team to gain an understanding of how each participant was feeling that day. One day, walking through the farm, one researcher asked a young person what they most enjoyed about the project. They replied that it was eating lunch together; at school, they mostly eat alone, explaining they are 'between friends'. They enjoyed the social time and democratic conversations we had when eating together.

This relational approach continued into the activities, providing space for them to explore the outdoors individually and together, using cameras, sound recording equipment, exploring the site, feeding animals and toasting marshmallows over a fire. They also learned where the food came from. One young person, disturbed to learn the pigs would be sent for slaughter, questioned whether we could wait for them to die of old age before eating them, suggesting that tests could be developed to check they would still be safe to eat. They had a chance to explore and to question what was involved in food production in a relaxed, informal way. They were also offered plant-based options, but opted for meat. This same young person openly admitted to wanting to leave school; unable to read, they are dreading the next academic year when they will start GCSE work. They are already making plans to work with their parent for a delivery company when they leave school, and do not see the point in being able to read:

'Dad can't read, he's dyslexic like me, mum can do the reading.'

While the school was aware of the young person's problems with reading and maths, it had no formal diagnosis for learning difficulty, and the school was unaware of these interrelated generational issues. This was a notable example of a young person disclosing their needs in this setting, which was then fed back to the school. It is concerning that such a young person has dismissed education as relevant for their future, revealing the importance of working with parents to address generational issues. Blandford (2017) argues that education systems and wider society, particularly policymakers shaped by middle-class norms, assume working-class children are less capable, and shows how this assumption entrenches inequality and blocks genuine social mobility.

Each session ended with reflections on what they had learned, enjoyed, found challenging and what they would like to do in the next session. One of the project team members reflected on the differences they had observed over the six weeks:

‘My favourite memory would be [...] seeing different people that don’t normally bond with each other sharing their experiences of what just happened. I thought that was really cool.’

In this way, we encouraged agency, participation and co-creation. Early on, one of the project team reflected that when considering the perspectives of young people, we also need to consider what it means to be an adult in the world today, as this impacts our expectations of and for young people. We held this in mind while analysing data.

An extract from a reflective conversation illustrates young people recognising and appreciating opportunities provided for them outdoors, and the relationship that developed with the project team, based on respect and trust:

Young person: ‘Today, you let everyone go off and do their own thing ... to be in the woods and outside ...’

Youth worker: ‘And why was it, do you think, that we were able to do that?’

Young person: ‘Because you can trust us ...’

3.2 ENERGY & FOCUS

In each group’s final session, we asked what they had learned during the project. They were reflective and insightful on the difficulties of mainstream education settings for them as neurodivergent young people. This included struggling to maintain focus in classrooms, and how the space, format of activities and opportunities to move around at Poole Farm better accommodated their needs. They were articulate in identifying and communicating their needs with respect to different educational environments.

One young person shared: ‘I find it hard to learn in a lesson, sat writing and listening, and writing in a book. Whereas if I’m doing something active whilst being able to listen and learn what I’m doing, I feel like I learn more [...] I think it might help educate people more in a certain way, depending on the activities ...’

Another shared: ‘I hate sitting still ... It would be better if we could move around and stuff ...’

A third emphasised: ‘You’ve got to have your pen down, you’re not allowed to fiddle with anything, you’ve got to literally sit with your hands on the desk, you’ve got to just sit and listen ... you’re trying to focus on the board, you’ve got everyone else around you ... you can hear them whispering and people fiddling with things ...’

Discussions throughout the sessions created space for young people to advocate for their own needs, recognising where and how the classroom environment failed to accommodate this. For example:

‘When I’m in a classroom too much, my brain gets really fuzzy, because I never told anybody this, but I’m autistic, so it’s really hard for me to control my energy inside a classroom.’

‘... we’re all concentrating on what we’re doing [...] we’re actually doing something, but in class we’re just sitting there ...’

‘Maybe we could come out into a school garden more ... more people to have more outside education.’

These discussions included all present. Youth workers and school staff shared their own thoughts, demonstrating receptiveness to the needs of young people and contributing to an environment in which all views were welcome. In response to a question on what one thing they would change about school, one youth worker commented:

‘Getting out in nature. It’s good for your mental health. It’s good to burn off that energy [and] give you a bit more focus to go back into lessons after.’

Another added: ‘I’m going to agree ... because one of the things that used to frustrate me when I worked in a school was children being kept in for their break times. Because that should be when they go and let off steam ... and if their behaviour’s escalating in class, what’s the reason for that?’

What was remarkable about these conversations is that young people heard adults – project team and school staff alike – talk openly about their challenges, in a way that is unlikely to happen in more formal settings.

3.3 SPACE & WELLBEING

A continually recurring theme was the need for space – both indoors and outdoors – to breathe, self-regulate, and develop trusting relationships that bridge adult and adolescent worlds. As one of the school staff shared:

‘Space in every sense of the word is being able to be still with your own feelings and your own thoughts ... But having other people around, you know, when you’re ready to interact, having adults around to talk to them if you need to, if you want to, but they’re there, just keeping an eye, making sure that everybody’s safe ... You know that you can do your own thing and nobody’s going to shout at you. Nobody’s going to go, “What are you doing?” Because there’s no need unless they’re in danger.’

Outdoor learning creates space for neurodivergent young people to engage with sensory-rich, playful, real-world experiences. This supports regulation, attention and intrinsic motivation in ways that traditional classroom settings often cannot. Mann et al. (2022) make explicit the connection between outdoor, experiential approaches and personal/social development, environmental awareness and wellbeing, which we observed within *Bridging Worlds*.

At the end of one session, the group discussed what they liked about being in the river and wading through it in waterproof boots. One young person commented:

‘It’s like not relaxing, but I’m relaxing at the same time ... it’s better because it’s a different environment than the environment at school.’

Later, the team reflect that the young person was describing mindfulness, and feeling present in a sensory experience, but was struggling to find the language because it was so different to their accustomed environment.

Reflective discussions were an important opportunity for young people to raise concerns and make suggestions regarding aspects of school life and wellbeing:

Reflecting on the project, they said: ‘It helps with, like, friendship ... this helps a lot, because you’re doing activities together.’

One young person shared: ‘People who I know, they struggle a lot ... people who are struggling to go to lessons. Unless you actually give them [the school], like, a proper reason, unless you do something to yourself or something, then they will help. But when people actually ask for it, they don’t.’

A team member challenged the suggestion that support is not available, and asked what ‘help’ would look like:

They replied: ‘It means being able to like show a thing [...] they say they’re there ... like in our school they don’t have counselling or anything unless, like, it’s proper serious. They should have a counsellor in a school where you can go to, like basically talk about it.’

Team member: ‘Before things get too serious ... those low-level things. Someone just to check in with?’

‘Yeah.’

This is where youth workers can work together with schools, in providing a level of pastoral support that can prevent issues from escalating, especially given current school budgeting and staff shortage issues (NYA, 2023; Hayes, 2026).

Spaces for sharing through informal conversations also emerged while moving around the site. Reflecting on a young person sharing their worries about an eviction notice their family had received, one youth worker observed:

‘We’re providing an atmosphere where they can talk about things that are concerning them.’

3.4 DISCOVERING & BUILDING

The exploratory activities across the site led to opportunities for discovery for young people. As they looked for signs of beaver activity, ‘beaver sticks’ (gnawed sticks) were sought as souvenirs:

‘Oh, it’s got all the teeth marks in and all! Perfect! Got me a beaver stick now! ... I’m actually so glad I get to bring one home.’

These moments of personal discovery also led to new findings for the Poole Farm staff. As a ranger commented after one of the sessions:

‘We found a new beaver hole that none of us actually knew about ... We knew of three in the whole woodland, and now we know of four. So that is actually a really amazing find.’

These moments were powerful, enabling young people to directly contribute to conservation activities. Sometimes, this emerged as tangents of games and other activities. For example, one group decided to end the session with a game of 'youth hunt' (a variation of 'hide and seek'), leading to the discovery of new dams as young people looked for a place to hide:

'... as we've walked over that thing, I've spotted a dam, and I told Sir [ranger] about it. And I said I wanted it to be named after me.'

A ranger added: 'We were going to an area away from the normal beaver ponds, so we don't disturb them, and we found this treasure trove of dams in this section of river that had been undiscovered until today.'

They explain how the newly discovered dams are different, using mainly stones from the riverbed rather than the usual sticks and branches, due to the location along the stream. They concluded:

'I'm buzzing ... We've not seen the beavers build this type of dam before.'

The young person who made the find added: 'Pretty good discovery ... I found a new dam. I'm so proud of myself!'

Some young people found connections with the site using cameras and sound recording equipment, immersing themselves in the role and responsibility of being a photographer or recordist. We observed young people wanting to share photographs they had taken, or passing headphones to another, saying, 'listen to this'. This created new ways of noticing: when taking photographs, it is necessary to remain still and retain focus on the subject. Likewise, field recording requires silence and concentration. We observed examples of young people focusing attention and connection with the space through such activities. For example, one young person decided not to take part in the aforementioned 'youth hunt' game because they were engrossed in the recording equipment and wanted to stay in a quieter part of the woodland. After some time, they heard a distinctive bird call. A team member identified the call as a green woodpecker. After much silence and concentration, the young person observed the activity of two woodpeckers around a nest hole and took photographs. This was the same young person who shared that they struggled to control their energy inside a classroom, and that their brain became 'fuzzy'.

The equipment also became the source of discovery of new skills and interests for young people, which fed back to the school. As one teacher commented:

'They've enjoyed the photography over the weeks ... I'm looking at getting a couple of cameras ... to use outdoors at school. Because I've seen that, you know, they've got that interest. I think that's important as well as them recognising that they're good at something ... that they might not have realised before.'

There were many instances in which a cycle of discovering and building was driven by movement between the organic and digital worlds. In one example, a butterfly collecting activity in Minecraft prompted the ranger to find some butterfly nets. The young people took what they learned from the game into the outdoor site, leading to identification of various butterflies and other insects.

Dam-building was another activity which cycled between the organic and digital environments. In one session, young people worked to rebuild an abandoned dam; one had arrived with two hoods up, leaving little of their face showing. Within ten minutes of being in the woods, both hoods came down. As they waded across the river, they commented:

'We need to work as a team.'

Later, one reflected: '... my favourite part was rebuilding the Beaver Dam. That's really fun.'

Another agreed: 'I like making the Beaver Dam. Everyone's helping.'

This activity was then recreated in the Minecraft world the following week, as the young people wanted to build a virtual dam in the same area of the site.

Building their own mods was another newly discovered skill, as one young person commented:

'I didn't know you could do mods in Minecraft ... well, I know you could, but I didn't know how to do it.'

Young people gradually added their own mods to the world, starting with simple food items. Becoming more adept at building mods, they added items that would be useful for the in-game conservation activities, such as a rainbow bucket, which had the effect of attracting nearby animals when shaken. This was inspired by the bucket used to feed the pigs on the farm. Later, some young people created their own mobs, including a squawking pink gull that steals food from the player.

3.5 IMPACT IN SCHOOL & COMMUNITY

Through engaging in *Bridging Worlds*, young people got to know the adults better; some engaged with farm staff, seeking support to mend their bikes and ideas for where to go fishing or walking. Others, who were referred to *Bridging Worlds* due to being ‘quiet and reserved’, began to open up. After lunch, one young woman asked us if we wanted to hear a ‘potato song’. After she sang to us, the teacher explained they were so surprised and delighted that they had texted colleagues to share what had happened, saying, ‘They won’t believe this.’

A youth worker involved in the project described how another ‘quiet and reserved’ young person came along to the youth centre gaming club after attending the first session, and was then more engaged in subsequent sessions:

‘She skipped in the door [of gaming club] and said, “Am I going to see you tomorrow?” [at Poole Farm]. And then she’s really joined in ... She’s getting a little more confident ... I think it shows how comfortable she is with us.’

Some young people were referred to *Bridging Worlds* because of ‘behavioural issues’ in school. One young person described how this had an impact on their behaviour in school because they wanted to continue to attend the sessions:

‘It also helps your behaviour in school because it gives you something to look forward to in the week ... Because, say, I got suspended yesterday, I wouldn’t have been able to do this today ... I was actually almost suspended yesterday, so it’s pretty good actually.’

While the young person admitted to having almost been suspended, they were also candid about noticing a difference in their own behaviour. This is confirmed by school staff:

‘Colleagues have seen a difference in them ... The behaviour team have said they noticed a difference in them ... I imagine that they are talking to other students about what they’ve done, because quite often students will say to me, “Miss, can we come to Poole Farm?” ... And one of them [who came to the farm] said, “I just wish that everybody could do it.”’

Young people who took part in *Bridging Worlds* wanted to share the experience with their peers, who they felt would also benefit. This simple wish challenges the premise of such projects being an intervention in response to behavioural issues, revealing more inclusive and equitable perspectives. This is echoed by another young person, who lamented a disproportionate focus on ‘bad behaviour’:

‘I wish like ... most of the time teachers call your parents, is if you’re bad. You rarely ever get a call if you’ve been good ... I think they should focus more on the good behaviour and not the bad.’

4. Conclusions & dissemination of findings

Combining real-world conservation with digital creativity fosters inclusion, teamwork and self-expression, enabling self-advocacy. The playful, nature-based and imaginative methods of *Bridging Worlds* offer insights for research, policy and practice to support wellbeing and engagement in mainstream education.

4.1 POLICY & PRACTICE IMPLICATIONS & RECOMMENDATIONS

Our recommendations align with *Youth Matters*, England's national youth strategy (DCMS, 2025), which emphasises local, collaborative and youth-centred practice, prioritising places to go, meaningful activities and adult support. The strategy's focus on empowerment, co-production with young people and enriched non-formal learning environments aligns with our findings on the value of participatory, creative and relational youth provision for supporting engagement and wellbeing.

4.1.1 Broader recognition of neurodiversity in education policy

Adopt the neurodiversity paradigm, shifting from deficit- to strengths-based language. Policy should prioritise adapting environments and practices over the remediation of individuals.

Practice: Embed neurodiversity-affirmative approaches in teacher training, youth worker education and local authority inclusion strategies.

4.1.2 Expanding non-formal & alternative learning spaces

Recognise and resource non-formal learning sites, including community farms, outdoor spaces and digital environments, as legitimate contexts for accredited learning.

Practice: Incentivise school-youth service partnerships and create pathways from non-formal settings into qualifications or personal development records.

4.1.3 Integrating creative digital platforms into learning policy

Legitimise creative digital platforms (for instance sandbox games such as Minecraft) as tools for learning, communication and co-creation within curriculum frameworks.

Practice: Develop guidance and continuing professional development for educators and youth workers on scaffolded use of digital environments and digital facilitation grounded in neuroaffirmative pedagogy.

4.1.4 Professional development for inclusive practice & cross-sector collaboration

Fund sustained training on inclusive, participatory practice and incentivise cross-sector collaboration between schools, youth services, health and community partners.

Practice: Offer modules on adaptive environments, creative inquiry and cultural contexts of neurodiversity. Establish local inclusion panels with multi-agency representation and young person leadership.

4.2 STUDY LIMITATIONS

This study involved a small, localised sample of 30 neurodivergent young people from one school partnership, potentially limiting transferability to other contexts. Reliance on qualitative methods, including observations, conversations and creative outputs, provides depth but lacks measurable outcomes often required by policymakers. As much as we want to challenge this, this may be perceived as a limitation for our research.

The design depended on access to Poole Farm and digital infrastructure, along with appropriately qualified and experienced staff, which may challenge transferability elsewhere.

Finally, the short timeframe restricts understanding of long-term impacts. Projects like this can act as a catalyst for change, and offer alternative perspectives and respite from day-to-day challenges (for staff and students). To make a real difference, more time is needed, accompanied by systemic changes. This cannot be left to schools and colleges alone; it needs a community-wide approach.

4.3 NEXT STEPS FOR BRIDGING WORLDS

Future work will build on these findings through continued resource development, practitioner training and exploration of long-term impacts. Inspired by the work at Poole Farm, in August 2025 the project team delivered a smaller phase of the project, funded by Plymouth Sound National Marine Park, to co-create the area around the Sound in Minecraft. In December, we were invited by Salford Youth Service to use our Minecraft-integrated approach as part of a consultative event for young people on what would make the city more child-friendly.

4.4 DISSEMINATION OF FINDINGS

Dissemination includes a growing body of public, professional and academic outputs. To date, this comprises two podcast episodes¹ on various platforms, a post for the BERA Blog,² and multiple conference presentations and workshops at national forums, including BERA Conference 2025 and Royal Geographical Society (RGS-IBG) 2025 Annual International Conference. Academic dissemination includes a journal article under review and accepted book chapters in forthcoming Bloomsbury handbooks on *Arts-Based Educational Research* (Hayes et al., in press), and *Outdoor Learning and Wellbeing* (Hayes & Hart, in press), alongside a practitioner-focused *Bridging Worlds with Minecraft* toolkit (in development). Further publications exploring neurodivergent inclusion in education are under review, ensuring that project learning informs policy, practice and research audiences across education, youth work and outdoor learning.

¹ <https://open.spotify.com/show/5iTA9Xz74BXBunJp00JnBR>

² <https://www.bera.ac.uk/blog/bridging-worlds-using-youth-work-to-blend-organic-and-cocreated-digital-environments-to-support-neurodivergent-young-people-in-mainstream-education>

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