



Spatially Democratic Pedagogy: Children’s Design and Co-Creation of Classroom Space

Jennifer Clement¹ 

Published online: 30 October 2019
© The Author(s) 2019

Abstract

Young children’s participation has been specifically foregrounded as a pedagogical element within education policy in Wales. However, there is currently little evidence that this policy concerned with participation has been enacted. This research describes an intervention, Spatially Democratic Pedagogy, as a pedagogical approach to foster young children’s participation, through design and co-creation of their classroom space. A group of six children, aged 4–5 years, alongside their teacher, were supported through a design-based intervention to enact, document and analyse this process. The research draws upon social understandings of space, as well as Froebel’s ideas about construction of communal gardens. Findings illustrate notable differences in the roles and relationships that formed between the teacher and the children when using Spatially Democratic Pedagogy. Children were teachers, planners, architects, negotiators and problem-solvers, as they participated in co-construction of their space. The argument is made that it is the process of design and co-creation that becomes the mediator for pedagogical change and acts as the driver for children’s participation. The co-construction of space is an important element to support young children’s participation in early years classrooms.

Keywords Children’s participation · Classroom space · Early childhood education · Froebel · Spatially Democratic Pedagogy

Résumé

La participation des jeunes enfants a été spécifiquement mise en avant en tant qu’élément pédagogique dans la politique de l’éducation au pays de Galles. Il y a toutefois peu de preuves à l’heure actuelle que cette politique s’intéressant à la participation ait été mise en pratique. Cette recherche décrit une intervention, la pédagogie spatialement démocratique, en tant qu’approche pédagogique pour favoriser la participation des jeunes enfants, à travers la conception et la co-création de l’espace de

✉ Jennifer Clement
jclement@cardiffmet.ac.uk

¹ School of Education & Social Policy, Cardiff Metropolitan University, Cyncoed Road, Cardiff CF23 6XD, UK

leur classe. Un groupe de six enfants, âgés de 4 à 5 ans, aux côtés de leur enseignant, a été soutenu par une intervention fondée sur la conception pour mettre en œuvre, documenter et analyser ce processus. La recherche s'appuie sur les perceptions sociales de l'espace, de même que sur les idées de Froebel concernant la construction de jardins communaux. Les résultats illustrent des différences notables dans les rôles et relations qui se sont formés entre l'enseignant et les enfants lorsque l'on fait appel à la pédagogie spatialement démocratique. Les enfants étaient des enseignants, des planificateurs, des architectes, des négociateurs et des résolveurs de problèmes en participant à la construction de leur espace d'activités. L'argument avancé est que le processus de conception et de co-création devient en lui-même le médiateur du changement pédagogique et agit en tant que moteur de la participation des enfants. La co-construction de l'espace est un élément important pour soutenir la participation des jeunes enfants dans les classes préscolaires.

Resumen

La participación de niños pequeños ha sido resaltada como un elemento pedagógico en las políticas educativas en Gales. Sin embargo, existe poca evidencia de que esta política de participación haya sido aprobada. El presente estudio describe un tipo de intervención, la Pedagogía Democrática del Espacio, como un método pedagógico para fomentar la participación de niños pequeños, mediante el diseño y co-creación de su espacio en el salón de clase. Se trabajó con un grupo de seis niños, entre los 4 y 5 años de edad, junto con su educador, utilizando una intervención con base en el diseño para recrear, documentar y analizar este proceso. La investigación se basa en el concepto social de espacio, así como también las ideas de Froebel sobre la construcción de jardines comunes. Los resultados ilustran diferencias significativas en los papeles y relaciones formadas entre los educadores y niños al utilizar la Pedagogía Democrática del Espacio. Los niños jugaron el papel de educadores, planeadores, arquitectos, negociantes, y personas capaces de resolver problemas, en la medida en que participaron en la construcción de su espacio de actividades. Se ofrece el argumento de que el proceso de diseño y co-creación se convierte en un elemento mediático de cambio pedagógico y actúa como conductor de la participación de los niños. La co-construcción del espacio es un elemento importante para fomentar la participación de niños pequeños en sus salones de clase.

Introduction

Children's participation is increasingly given prominence in international and national policies (Tisdall et al. 2014), including in the law and policies of Wales. It is recognised as one of 12 pedagogical elements in the Foundation Phase, the curriculum framework for all children aged 3–7 years (Welsh Government 2015; Taylor et al. 2015). However, recent research has questioned how this participatory rhetoric is enacted within schools (Croke and Williams 2015; Lewis et al. 2017). This research creates *Spatially Democratic Pedagogy* (Clement 2018) a pedagogical process to support children's participation in the design and co-creation of classroom

space. It explores how children might meaningfully participate within these spaces to follow their own interests. Lack of attention of the role of physical space in learning has resulted in its relegation to a backdrop for learning, where it is seen as the container within which education sits (Fenwick et al. 2011). Consequently, this reinforces the misplaced notion that classroom space is neutral and disconnected from teaching and learning (Lenz-Taguchi 2010). This research explores what happens when children participate in design and co-creation of their classroom spaces. It examines the different pedagogical roles and relationships that are fostered when children and the teacher engage in the construction of the communal space within a classroom.

Children's Participation: Policy Directions in Wales

There is a clear and strong commitment by the Welsh Government to support children's participation in decision-making, through a rights-based perspective (Welsh Government 2010, 2011, 2015). Since the country's devolution, there has been an epochal shift in the importance given to children's participation and children's rights that has been described as emblematic of Welsh Devolution (Rees 2007). In 2001, the Welsh Government passed *The Children's Commissioner for Wales Act* making Wales the first country in the UK to have an independent Children's Commissioner, a lead that was subsequently followed by other nations within the UK. The formal adoption of the United Nations Convention on the Rights of the Child (UNCRC 1989), by the Welsh Government, in January 2004, meant the UNCRC was now to be considered when creating policy for children (Welsh Government 2015). The *Rights of Children and Young Persons (Wales) Measure 2011* was seen to further strengthen the government's commitment with all ministries having to give due regard to UNCRC whenever they exercise their functions, positioning the UNCRC as the basis for all its work (Lyle 2014).

In 2010, the Welsh Government called for a change in school culture, in which pupil participation would become 'part and parcel' of everything the school does. This resonates with Dewey's (1916) positioning of participation as both the objective and means of education when, pedagogically, children become part of their community through their participation within it. However, in a recent evaluation of the Foundation Phase, Taylor et al. (2015) identified children's participation as their ability to 'spontaneously direct their learning, e.g. making mud cakes for the café' (p. 136) or their ability to 'choose which activity to engage with' (p. 139). However, these participatory practices are framed by spaces that already have predetermined ways of being and overpower the intentionality of the child (Goouch 2010). This construction of teacher-led, classroom space permeates curriculum frameworks, supporting documents and evaluation reports. Within these documents, teachers are positioned as the architects of classroom space and given the responsibility to provide spaces for children (Welsh Government 2015; Taylor et al. 2015; Donaldson 2015). Children become 'users' of space, rather than participants, as the physical classroom environment is seen as the domain of the teacher and as pedagogically staged space (Nordtømme 2012). This is problematic as participation should go

further than mere individualistic choice routines (Bae 2009). Positioning children as designers and co-creators of their classroom space offers opportunity to explore participation as a spatial and communal endeavour.

Constructions of Space in Early Childhood Education

In this research, space is positioned as a product and a producer of its political, social and cultural practices (McGregor 2003). Drawing on Lefebvre's (1974) understandings, social space is perpetuated through the features apparent in these physical spaces. Spaces are designed to deliver an expected use, and the 'users' will passively interact with whatever is given to them. Classroom space can be viewed as a construct of its wider institution, reflecting the requirements of the school as a political, social and cultural establishment (Markström 2010). Further, space can be seen as a way of supporting and influencing the roles and relationships which occur within it.

The spatial and material nature of people's lives is well established in both geography and architecture but has remained on the fringes of research and practice within early childhood education (Vuorisalo et al. 2015). This dismissal of classroom space has resulted in its relegation to the backdrop of learning, where it is seen as the container within which education sits (Fenwick et al. 2011). Constructing space in this way validates human-centric notions of learning. Learning happens when children act upon their environment (BERA-SIG 2003). Within this construction, Stephen (2010) noted it was the processes of acting and thinking that drive the learning, with dialogue and interaction at the heart of the process. This creates an almost passive construction of space, supporting a blindness towards how we think about the spatial and material factors of education practice (Sorensen 2009). Consequently, education policy and pedagogy has not explored, questioned or placed an emphasis on classroom space.

Similar criticisms can be levied at the Foundation Phase in Wales (Welsh Government 2015) in which learning is delivered by teachers, with status given to the communicative role of learning through language. Within this construction, the importance of space may not be recognised. Indeed, a common feature among a number of recent reviews is a lack of any detailed or theoretical consideration, evaluation or discussion about classroom space (Donaldson 2015; Taylor et al. 2015; Welsh Government 2017). A lack of spatial awareness and engagement with spatial practice is concerning in light of the new participatory pedagogies beings discussed.

Spatially Democratic Pedagogy

Architectural space, the space of building design, is considered to be situated in cultural, social and socioeconomic frameworks (Cryslar et al.2012). Architectural space gives form to the values and structures of a society, as well as the more functional needs of any given institution (Davies 2011). In this way, architectural space is a mediator between people and their wider environment.

Demonstrating the transmission of cultural values through school architecture, Taylor (1993) highlighted that although we expect classrooms to teach children to

live in a democratic society, we often provide spaces that look like a police state and Taylor (1993) talks about giant chain-link fences, locked gates, guards and guard dogs. There is an incongruence between the democratic foundations of our society and the participatory and democratic understandings evident within classroom spaces. All of the spaces have already been decided upon and created before children arrive. Architecturally these spaces become barriers to actions that have not been considered, planned or permitted. Consequently, the spaces we are creating for young children do not support the enactment of the democratic principles or practices espoused in Welsh education policy.

Spatially Democratic Pedagogy rejects determinism about the use of classroom space and requires user involvement. Beginning with an empty space that sits alongside existing classroom spaces, Spatially Democratic Pedagogy (Clement 2018), advocates for users to design and create spaces for themselves. It embodies the notion that empty spaces can develop meaning through the interactions between the learners and the environment (Jilk 2005), which can support collaboration and storytelling (Scheeren 2015). Exploring possibilities of flexible design as a pedagogical concern supports the construction of classroom space as a site of collaboration, democracy and participation.

Placing value on the children's co-creation of space resonates with Froebel's (1899) use of individual and communal garden design to support children's 'social and citizen collective life' to foster a pedagogy which focussed on relationships between materials, spaces, children and adults. In doing so, he supported a participatory and democratic approach to living and learning. Allowing children to design and co-create their classroom spaces seeks to position children as a part of a democratic classroom community through the construction of space. Supporting children in constructing their space resonates with an epistemological construction of knowledge which emerges as we participate in the world, with knowledge existing only within these participatory actions (Osberg and Biesta 2008).

Spatially Democratic Pedagogy rather than representing existing knowledge is interested in the formation of new understandings, turning schools into places of renewal instead of their current models of replication (Moss and Urban 2010). Within this construction, children are positioned as social actors, with their own ideas, perspectives and abilities to influence decision-making about their classroom space. In this way, *Spatially Democratic Pedagogy* is positioned as an everyday, informal, lived understanding of participation. It supports children's democratic involvement in the design and co-creation of classroom spaces. It is a model within which participation is seen to emerge through the construction of physical spaces.

Research Method

This research proposes an alternative construction of classroom space. In doing so, an intervention was created. It sits within a methodological paradigm of design studies (Reimann 2011). Interventions are seen to '... embody specific theoretical claims about teaching and learning, and help us understand the relationships among educational theory, designed artefact, and practice' (Design-Based Research Collective

2003, p. 5). Conducted in authentic settings, often with a substantial change in classroom practice, design-based research requires teachers to work with both theoretical and practical ideas to develop the specific intervention in their classrooms.

This intervention took place over 6 months in a reception class, with one classroom teacher, Claire, and a group of six children aged between 4 and 5 years, in South Wales. Purposive sampling (Cohen et al. 2018) was used to recruit the teacher. This deliberate selection sought qualities, experience, competence and interest in practitioner enquiry and four teachers that had previously worked on university supported research were approached. Institutional ethics approval was obtained from the relevant committee at Canterbury Christ Church University in the UK. Informed consent to 'opt in' to the study was obtained from the teacher, parents and children.

Research Design

The intervention, *Spatially Democratic Pedagogy*, used a design process with seven stages that is detailed in Table 1. This process was designed to support children's design and co-creation of their classroom space. The sessions with the children and teacher were audio-recorded and transcribed. Throughout the process, additional planning and reflective conversations with the teacher and the children were also undertaken, recorded and transcribed as field notes. These transcribed conversations and field notes constituted the data that are reported in the analyses.

Findings: Enacting Spatially Democratic Pedagogy

This section highlights what happened when the children participated in the construction of their classroom space. Within design-based research, analysis considers both the contribution the study makes to theory building and to the local contexts (Kennedy-Clark 2013). The quality of the intervention is understood by its usefulness and effectiveness for the participants (Moses and Knutsen 2012).

The reporting of the intervention data which follow focuses on 9 h of verbatim transcriptions taken during the intervention and across reflective discussions with

Table 1 The design process model

Session	Design stage	Accompanying overview/instruction
1	Empty the space	Empty the space a week before the first design session
2	Initial designs	Children physically explore the empty space Children discuss and draw initial design ideas
3	Group design	Discuss individual designs created Create/choose a group design for the space
4	Materials needed	Make a list of the resources/materials needed
5	Create materials	Create resources and document activities
6	Create the space	Discuss the resources made and create the space together
7	Use the space	

the children and the teacher. These transcriptions were used to develop an understanding of any perceived shifts in children's learning that would not have occurred without the intervention (Reimann 2011). Reflective discussions are developed through collaborative dialogues between the teacher, the children and the researcher (Bradley and Reinking 2011) and become the documentation about how decisions, interpretations and actions were made and reflected upon. Making sense of the data and how it is constructed is typically regarded as 'highly inferential, interpretive and cyclical' (Reimann 2010, p. 42), fostering an unwaveringly local approach.

Stage 1: Empty the Space

The space was emptied a week before the design process began. This was to allow time for the children to become accustomed to the space, as an empty space, with no furniture, resources or materials and no prescribed use. The empty space sat between the carpet area (separated by a cupboard) and the painting, sand, water and play dough area (separated by a drying rack and a set of art trays which held paper and other craft materials).

Stage 2: Initial Design

In Session 2, the children were split into two groups and each group explored the empty space. They sat in the space and discussed their initial ideas and what they might like to create in the space (designs included a party room, a dinosaur park, a veterinary clinic and a school). The children then moved to sit around a table and drew their initial designs. In both activities, the children chatted enthusiastically about their ideas and designs, which appeared to reflect their interests and experiences.

Stage 3: Group Design

During Session 3, the children were asked to decide which design they would choose to work on together and create in the space. After a lengthy discussion, the individual designs were put into a 'bin' and the party room design pulled out. When the party room design was drawn out the children cheered and talked excitedly about the design. They adapted their individual designs to work within the party room (a 'pin the tail on the dinosaur' game was created) and eagerly gave ideas to further develop the design. They did not appear upset that their individual designs had not been chosen. In a memo recorded after the session, the teacher's initial response was noted in the data:

Directly after the session the teacher said she was surprised that the children didn't appear disappointed that their designs hadn't been chosen. She talked about the children's excitement to be creating the party room and how they quickly started coming up with ideas for the space even though, for a number of them, it wasn't their original design" (Researcher's field notes).

When considering the transcriptions as part of a reflective session, the teacher again highlighted her surprise at the children's response and her deepening interest in the children's lack of disappointment,

That would be something to ask them, how did they feel when their idea wasn't picked out ...because it'll be interesting to know why they weren't disappointedI would have definitely said they wouldn't be happy if their idea did not come out" (Teacher's reflective comment).

In subsequent focus groups, used to reflect on the process, the children talked about how they liked the design which was chosen and why they were happy to accept the design idea, even if it wasn't their individual idea.

Jen: Mrs M and I were talking and we wondered if you felt disappointed that your idea hadn't been chosen?

Charley: No

Catrin and Elanor: No

Jen: Didn't you? Why weren't you disappointed? How did you feel?

Elanor: Coz I wanted that one.

Charley: Yes, I wanted a party room or a restaurant.

Gareth: I wanted a dinosaur party room.

Jen: So how did you feel when the party room was pulled out?

George: Fun

Molly: Wonderful

George: Ummmmmmm, funny. Funny.

Jen: Mrs M and I thought you might have been a bit disappointed, the vets wasn't chosen and the school wasn't chosen. Were you disappointed?

George: Mmmmm, mmmm (shaking his head)

Molly: We liked it.

Reflecting on these transcriptions of the children's responses, the teacher discussed her approach as being more collaborative than she had first anticipated. She questions why the children may have been so comfortable working in this way and wonders if it was because the process was child, rather than adult led.

Within this group it was only really, Catrin's idea, that Molly then went along with....they all did take it on board as their own, didn't they. Even the likes of George, who, you know, in actual fact, is one of the ones that uses the space the most. ...It's strange, because it was only one person's idea that got pulled out and the others had nothing to do with it but they did go with it. Surprisingly, actually. So is it because its come from another child, that makes it different to coming from us? There was no quibbling, was there, when I pulled it out there were no, 'uggghhhh it's not mine, there wasn't any of that, was there....Was it that they could see it was completely fair? I don't know, because even if something is fair, you'll have children going, it's not fair because it's not mine. Or was it because all of the ideas in there were theirs? (Teacher's reflective comment).

These initial reflections began to create a framing for children's participation which can include both individual and collective experiences.

Stage 4: Materials Needed

Session 4 required the children to make a list of all the materials and activities they would need in their party room. Collectively, the children decided upon invitations, a glitter ball, disco lights, a dance floor, pin the tail on the dinosaur, dressing up, balloons, music and pass the parcel. In total, 27 design ideas were added to the list.

Stage 5: Create the Materials

This stage happened over a 2-week period as the design ideas were included as part of the weekly planning activities. All of the activities took place within the existing classroom spaces and the main hall (e.g. making invitations in the writing area; creating 'pin the tail' games in the painting area; a dance floor in the drawing area and dance lessons in the main hall). These were developed as whole class activities, and all children within the reception class were offered the opportunity to create the materials. The class spent 2 weeks making the resources, learning games and practicing dances together.

Stage 6: Create the Space

During this design session, the children created the final space together. This session lasted for just over an hour and was very loud, and the children were very busy. They chatted enthusiastically to each other throughout the process, commenting on the materials they had made and how the space looked.

Stage 7: Use the Space

The children spent a number of weeks using their party room space, with the teacher noting it was a popular space. The use of the 'party room' resonates with the requirements of 'effective' use of classroom spaces currently favoured in the evaluation of early years spaces where '... positive outcomes for the activity are either modelled, demonstrated, explained' (Siraj-Blatchford and Sylva 2004, p. 727). However, it is the children who had the opportunity to model, demonstrate and explain their ideas. Usually within these spaces, it is the children who have the spaces modelled, demonstrated and explained to them, but placing them as designers and co-creators of the spaces and activities enabled the roles to change. When reflecting on the children's roles and relationships during the process, and discussing the transcripts, the teacher noted the children had regularly been modelling and organising activities and demonstrating games to other children,

They've learnt lots of skills along the way, they've learnt how to play games, they've learnt how to teach others how to play games, they've learnt

about group work and how to do this together. You know, the creative skills they've learnt, and the writing, telling everyone what it is. (Teacher's reflective comment).

The teacher described how during this process the children's design ideas had repositioned the children's roles within the space noting, 'The children are now beginning to take on the teacher role, teaching other children games such as pin the tail on the dinosaur'. These learning opportunities resonate with the requirement that children are involved in, 'Activities that allow them to adopt a range of roles, including leadership within a small group, paired learning or working within a team' (Welsh Government 2015 p. 10). When I asked the children to reflect on this new role in a subsequent focus group, George explained he had been teaching his friends how to play musical statues.

Jen: Ok, now, the other day Mrs M said that she thought some of you had been teaching other children what to do in the party room.

Carys: He did.

Jen: What did he do?

Carys: Musical statues.

Jen: Who did you teach how to play that?

George: My frinds, Giovanni and Josh and...

Gareth: George, what about me?

George: Giovanni, Josh, Cameron and Gareth.

Jen: So, you taught them. What did you do?

George: First I didn't put the music on but I told them that when the music stops when the music is on you dance and then one boy didn't listen and guess who that was, Giovanni.

Jen: oh.

George: Because he kept on dancing.

Reflecting on George's earlier transcriptions, he had asked for music, dancing and games. He wanted a space to be physical in, to dance and to play games with his friends. As the designer and creator of the activity, he took on the role of teaching others how to play. The teacher noted three of the six children became teachers within the space, teaching others how to play musical statues, pin the tail on the dinosaur and pass the parcel. After recognising themselves as 'teacher' within the space, some of the children also perceived a change of role for the teacher.

Jen: So, my next question is what have you done to make this space? What did you do?

Molly: I think it was my idea.

Jen: Who do you think had the idea of the party room to begin with?

Molly: Me and Catrin.

Jen: Ok, so you had the idea of the party room. Then who decided we needed a floor, we need a pin the tail, we needed balloons, food, costumes. Who decided all that?

Catrin: I did.
Charley: And I did.
Molly: Me too.
Jen: And you. What did Mrs M do then?
Catrin: Write them on a list.
Charley: Help.

The pedagogical roles and relationships of both the children and the teacher appeared to be modified within this communal construction. They recognised the changes in themselves and others.

Discussion

The co-construction of space was underpinned by participation and democracy, and the resulting relationships between the teacher and the children appeared to support more democratic and participatory roles and relationships. Both participation and power within the space appeared to become more shared and dispersed. The decentralisation of the construction of space, activity and outcomes, as well as the decentralisation of the teacher as the architect of space positioned the children as participants, rather than just as users of their classroom spaces.

Within current construction of classroom space, roles for both teacher and children are well documented. The teacher provides space for children to engage with, whilst children are expected to engage with the spaces provided for them. This construction of space not only creates the stage for learning, but also shapes the teaching and learning within the space. The teacher's practice is linked to space, 'how' she teaches, not just 'what' she teaches is directed by classroom spaces. In this way, teaching and learning is scripted by space.

The intervention reported in this research indicated that by creating an empty space within the classroom, the structures of participation within the existing space and the roles and relationships between the children, the teacher and the space were modified. During the intervention, the children had enacted roles of architects, teachers and co-creators, developing and making their design ideas for the empty space. The teacher's role was also modified within the intervention and, on reflection, the children noted she had been the 'helper', assisting them to realise their design ideas within the space. Within this construction, the teacher becomes the attendant, supporting the children's ideas and designs. This attendant role is considerably different to the role the teacher fulfils within their existing spaces.

Children's Learning Within Empty Space

Learning within *Spatially Democratic Pedagogy* is concerned with children's ability to participate. Learning outcomes and content-based learning are a result of the individual design. Therefore, this more formal understanding of children's learning within the process was dependent on what the children chose to design/create. Whilst the more academic and outcome-driven constructions of learning were not

foregrounded in the process, they were acknowledged, for example, with the children writing instructions, invitations, using symmetry to create the dance floor and using different art applications to create the decorations.

Drawing from the curriculum framework (Welsh Government 2015), children's learning throughout the intervention can also be aligned to a number of the skills across the curriculum, as well as the range of experiences required for areas of learning, such as, *Personal and Social Development* and *Well-being and Cultural Diversity*. These included the children's opportunities to: 'develop their thinking across the curriculum through the processes of planning, developing and reflecting' (p. 6); as well as 'activities that allow them to be creative and imaginative ... communicate their ideas ... solve problems and discuss outcomes ... value the learning, success and achievements of themselves and other people ... form relationships and feel confident to play and work cooperatively' (p. 10).

This research intervention displayed outcomes related to skills-based requirements. The teacher noted that the children had, '... learnt lots of skills along the way. They've learnt how to play games; they've learnt how to teach others how to play games; they've learnt about group work and how to do this together'. Within the curriculum framework (Welsh Government 2015, p. 10), children are also required to be involved in, 'activities that allow them to adopt a range of roles, including leadership within a small group, paired learning or working within a team'. *Spatially Democratic Pedagogy* also offered the children collaborative working opportunities and the data demonstrated the children often taking on the teaching role, teaching other children the party games or the party activities they had created.

Importance of the Construction of Space

Findings across the intervention suggest that it is the communal construction of space that acted as the driver for children's ability to participate. This indicates that classroom space is important, that it supports the roles and relationships that form within it, modifies pedagogical practices and regulates the course of the lives of children and teachers. Analyses of the intervention suggested there were notable differences in the relationships and roles that formed between the children, the teacher and the space when the children's designs were used to support their participation within the classroom. Data suggest that the democratically aligned principles underpinning the construction of the space were also reflected in the relationships which formed during the process. Within this framing of space, it is the process of design and construction which becomes the mediator for change. In this way, the construction and production of space is considered to support the values of the space and, consequently, the relationships and spatial practices which form within the space.

This framing of space allowed the children's design and co-creation of the party room to become the mediating factor between its wider democratic political and social underpinnings and the spatial relationships and practices formed within the space. If we consider the relationships which form within the spaces as resulting material practices (Massey 2005), it is the co-creation of space which becomes important in supporting children as participants. This enables a theorisation of

children's design and co-creation of space as having the potential to support their participation. In view of the data discussed above, this paper argues it is also the construction of space which should be considered as a vehicle to support children's role as participants within their learning. Underpinning the design process with a democratic and participatory approach to space reflected the principles and practices of Froebel's (1899) communal gardens. Within this construction, children's participation is supported as an approach to living. Participation becomes the political and ideological value which underpins the construction of space, and results in practice which similarly supports democratic and participatory principles.

Although this paper acknowledges the construction of the 'party room' and the resulting participatory practices are unique to the children involved in its design and co-construction, supporting children's participation in the construction of their classroom spaces could be widely applied and be very important, within early years classrooms. Further research is needed to support and explore how Spatially Democratic Pedagogies can support the enactment of children's participation.

Conclusion

In this research, *Spatially Democratic Pedagogy* offered opportunities for children to participate as problem-solvers, teachers, architects and negotiators. These shifts in pedagogical role for the children and the teacher illustrated the theoretical approach taken to the design and construction of space. Froebel (1899) was repositioned and reimagined to support the co-creation of classroom space with children, resulting in participatory practice that was shared between children and teachers and across materials and spaces. Within this construction, children's participation becomes a collective and material process and the communal construction of classroom space becomes a site of participatory practice for young children.

Thirty years on from the UNCRC, children's rights are well established within legislation and education policy in Wales. However, their limited enactment in practice should be an on-going concern and a continued focus for education research. *Spatially Democratic Pedagogy* has demonstrated the opportunity it offers to support children in the enactment of these participatory practices. To realise the benefits of *Spatially Democratic Pedagogies*, teachers, teacher educators and researchers must engage with these theoretical underpinnings of space and foreground the importance of children's participation in the construction of their classroom spaces.

Acknowledgements PhD research was funded by The Froebel Trust.

Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

References

- Bae, B. (2009). Children's right to participate—Challenges in everyday interactions. *European Early Childhood Education Research Journal*, 17(3), 391–406.
- Bradley, B. A., & Reinking, D. (2011). Enhancing research and practice in early childhood through formative and design experiments. *Early Child Development and Care*, 181(3), 305–319.
- British Educational Research Association—Early Years Special Interest Group [BERA-SIG]. (2003). *Early years research: Pedagogy, curriculum and adult roles, training and professionalism*. Retrieved from <http://www.bera.ac.uk/wpcontent/uploads/2014/01/beraearlyyearsreview31may03.pdf>.
- Clement, J. (2018). *Spatially Democratic Pedagogy: A pedagogical intervention to support children's design and co-creation of classroom space. A new trajectory for Froebel's Kindergarten spaces?*. Ph.D. thesis. Canterbury Christ Church University, Canterbury.
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education*. London: Routledge.
- Croke, R., & Williams, J. (2015). *Wales UNCRC monitoring group report to the United Nations Committee on the Rights of the Child*. Cardiff: UNCRC Monitoring Group.
- Crysler, C. G., Cairns, S., & Heynen, H. (Eds.). (2012). *The Sage handbook of architectural theory*. London: Sage.
- Davies, C. (2011). *Thinking about architecture: An introduction to architectural theory*. London: Laurence King Publishing.
- Design-Based Research Collective. (2003). Design-based research: An emerging paradigm for educational inquiry. *Educational Researcher*, 32(1), 5–8.
- Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York: MacMillan.
- Donaldson, G. (2015). *Successful futures: Independent review of curriculum and assessment arrangements in wales*. Cardiff: Crown Copyright.
- Fenwick, T., Edwards, R., & Sawchuk, P. (2011). *Emerging approaches to educational research: Tracing the sociomaterial*. London: Routledge.
- Froebel, F. (1899). *Education by development: Second part of the pedagogics of the kindergarten* (J. Jarvis, Trans.). London: Edward Arnold.
- Goouch, K. (2010). *Towards excellence in early years education, exploring narratives of experience*. London: Routledge.
- Jilk, B. (2005). Place making and change in learning environments. In M. Dudek (Ed.), *Children's spaces* (pp. 30–44). Amsterdam: Architectural Press.
- Kennedy-Clark, S. (2013). Research by design: Design-based research and the higher degree research student. *Journal of Learning Design*, 6(2), 26–32.
- Lefebvre, H. (1974). *The production of Space* (D. Nicholson-Smith, 1991 Trans.). Oxford: Blackwell.
- Lenz-Taguchi, H. (2010). *Going beyond the theory/practice divide in early childhood education*. Oxon: Routledge.
- Lewis, A., Sanwar, S., Tyrie, J., Waters, J., & Williams, J. (2017). Exploring the extent of enactment of young children's rights in the education system in Wales. *Wales Journal of Education*, 42(2), 27–50.
- Lyle, S. (2014). Embracing the UNCRC in Wales (UK): Policy, pedagogy and prejudices. *Education Studies*, 40(2), 215–232.
- Markström, A. M. (2010). Talking about children's resistance to the institutional order and teachers is pre-school. *Journal of Early Childhood Research*, 8(3), 303–314.
- Massey, D. (2005). *For space*. London: Sage.
- McGregor, J. (2003). Making space: Teachers' workplace topologies. *Pedagogy, Culture & Society*, 11(3), 353–377.
- Moses, J. W., & Knutsen, T. L. (2012). *Ways of knowing: Competing methodologies in social and political research*. New York: Palgrave Macmillan.
- Moss, P., & Urban, M. (2010). *Democracy and experimentation: Two fundamental values for education*. Guetersloh: Bertelsmann Stiftung.
- Nordtømme, S. (2012). Place, pace and materiality for pedagogy in a kindergarten. *Education Inquiry*, 3(3), 317–333.
- Osberg, D. C., & Biesta, G. J. J. (2008). The emergent curriculum: Navigating a complex course between unguided learning and planned enculturation. *Journal of Curriculum Studies*, 40(3), 313–328.

- Rees, G. (2007). The impacts of parliamentary devolution on education policy in Wales. *Welsh Journal of Education*, 14, 8–20.
- Reimann, P. (2010). Design based research. In L. Markauskaite, P. Freebody, & J. Irwin (Eds.), *Methodological choice and design: Scholarship, policy and practice in social and educational research*. New York: Springer.
- Reimann, P. (2011). Design Based Research. In L. Markauskaite, P. Freebody, & J. Irwin (Eds.), *Methodological choice and design: Scholarship, policy and practice in social and educational research* (pp. 37–50). New York: Springer.
- Scheeren, O. (2015). Why great architecture should tell a story. *TED talks*, Retrieved from https://www.ted.com/talks/ole_scheeren_why_great_architecture_should_tell_a_story/.
- Siraj-Blatchford, I., & Sylva, K. (2004). Researching pedagogy in English pre-schools. *British Educational Research Journal*, 30(5), 713–730.
- Sorensen, E. (2009). *The materiality of learning: Technology and knowledge in educational practice*. Cambridge, MA: Cambridge University Press.
- Stephen, C. (2010). Pedagogy: The silent partner in early years learning. *Early Years*, 30(3), 15–28.
- Taylor, A. (1993). How schools are redesigning their space. *Educational Leadership*, 51(1), 36–41.
- Taylor, C., Rhys, M., Waldron, S., Davies, R., Power, S., Maynard, T., et al. (2015). *Evaluating the foundation phase: Final report*. Cardiff: Welsh Government.
- Tisdall, E. K. M., Gadda, A. M., & Butler, U. M. (2014). *Children and young people's participation and its transformative potential: Learning from across countries*. Basingstoke: Palgrave Macmillan.
- United Nations. (1989). *Convention on the Rights of the Child*. Geneva: UN Office of High Commissioner for Human Rights (OHCHR). Retrieved from <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>.
- Vuorisalo, M., Rutanen, N., & Raittila, R. (2015). Constructing relational space in early childhood education. *Early Years: An International Research Journal*, 35(1), 67–79.
- Welsh Government. (2010). *Proposed statutory guidance on pupil participation*. Cardiff: Crown Copyright.
- Welsh Government. (2011). *Children's rights agenda*. Cardiff: Crown Copyright.
- Welsh Government. (2015). *Foundation phase framework for children aged 3–7 years old in Wales*. Cardiff: Crown Copyright.
- Welsh Government. (2017). *Education in Wales: Our national mission*. Cardiff: Crown Copyright.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.