Assignment 1: Written assignment.

According to Froebel Trust (no date a), Smedley and Hoskins (2018) and Catucci, Berg and Ärlemalm-Hagsér (2024) Friedrich Froebel was the founding father of the kindergarten and early childhood education and care. Froebel Trust (no date a) discusses Froebel's 8 principles to his pedagogical approach: unity and connectedness, autonomous learners, the value of childhood in its own right, relationships matter, creativity and the power of symbols, the central importance of play, engaging with nature and knowledgeable, nurturing educators. Moreover, Sakr and Kaur (2024) suggest that Froebel is considered the innovator of learning through nature. However, Sakr and Kuar (2024) also suggest that Froebel has such prominence in literature and research as this is considered readable and therefore related books and journal articles sell and are lucrative, and that this could artificially inflate the benefits of his findings. This assignment intends to critically explore Froebel's approach to children learning by engaging with nature and how this links to and supports children's learning. This will explore how this Froebelian principle of engaging with nature align with the Curriculum for Non-Maintained Nursery Settings (CfNMNS) (Welsh Government, 2024) and the opportunities and barriers to implementing the Froebelian approach within practice to delivery of the CfNMNS, specifically one of its four purposes – Ethical informed citizens, as well as the Belonging development pathway.

Froebel Trust (no date c), Tovey (2022) and Adams and Short (2025) state that Froebel believed that children should engage with nature to form an understanding of their connections to the world around them. Tovey (no date) discusses Froebel Kindergartens and states that each child had an area of the garden that was theirs to take care of, plant and harvesting and growing an understanding of nature and life cycles through hands on experience. Thomas (2022) and d'Ascoli and Hunter (2022) argue that Froebel believed that for children, being out in nature provides them with an opportunity to recognise that they are "part of a much bigger whole" and begin to understand their place in the world as well as the impact they are having within it. This also links to Tovey (2022) who explains that Froebel believed children should be given real opportunities to make links in nature to enable them to come to understand more complex ideas and issues such as pollination and climate change. Furthermore, d'Ascoli and Hunter (2022) and Green and Clark (2024) state that

Froebel suggests that although children can access nature in other ways, being outdoors in a consistent setting, on a regular basis, provides them with opportunities to notice and analyse the changes that occur through the seasons and to foster a sense of belonging through connection to the place.

Welsh Government (2023) discusses the positive commitment to providing opportunities for outdoor learning in Wales, through the writing of the CfNMNS. Additionally, Ty Froebel (no date) discusses the synergies between these Froebelian beliefs and the four purposes within the Welsh curriculums and states that a Froebelian approach can support the delivery of these curriculums. Moreover, Froebel Trust (no date b), Froebel Trust (2023) and Boulton and Thomas (2022) state that during the writing of the CfNMNS and Four Purposes there was a harmony with Froebelian beliefs. However, Froebel Trust (2023) argues that despite the similarities between Froebel's principles and the pedagogy suggested within CfNMNS, there is no acknowledgement of underpinning by his theories, despite this acknowledgement potentially providing better understanding to practitioners.

Tovey (no date), Boulton and Thomas (2022) and Early Education (2021) discuss that there are many benefits to learning outdoors including the sensory experience to promote awe and wonder. Moreover, Boulton and Thomas (2022) states that learning and retention of information is enhanced when children's senses are ignited and that this is more likely to happen in the outdoors that in the indoors. Molner *et al.* (2026) discusses that learning in nature supports young children to become ready to learn and creates a love for learning. Furthermore, Yacin and Erden (2025) state that there is growing international recognition of the "Forest Pedagogy" initiated in Northern Europe and the benefits to children's development.

Thomas (2022) argues that children learning by engaging with nature also links to many of the other Froebelian principles and beliefs as learning in nature allows children to learn to build relationships and be interconnected with each other as well as nature and the natural world, as the environment allows them to slow down and observe and to learn in nature not just about it. Green and Clark (2024) discuss slow pedagogy and how it offers opportunities for children to explore nature first hand and values the importance of an enabling adult to spark and extend curiosity to support children's development. Moreover, within a case study Green and Clark (2024)

discuss the value added when children were offered growing spaces, as was suggested by Froebel, enabling learning about their local biodiversity, food life cycles and caring for and connecting with the environment.

Hwb (no date) links the four purposes to the benefits of outdoor learning and time spent in nature, with one benefit that it explores being “Outdoor learning can develop attitudes which contribute towards a greener Wales”. In support of this, Smedsrud, Lenes and Moser (2026) state that the outdoor learning style of pedagogical approach supports sustainability outcomes through enabling children to develop positive associations with nature and nurturing a sense of responsibility to the world. National Resources Wales (2022) further suggests that there is a need for an authentic way of teaching around sustainability which can be promoted through connection and empathy with nature and outdoor learning. Additionally, Caglayan, Capar, and Zeteroglu (2024) state that outdoor learning allows children to learn more experientially, and that engaging, natural outdoor environments support children to be more curious and foster interest in the environment. This is additionally supported by Adams and Short (2025) who discusses size of spaces available not being a barrier to growing through the use of planters and pots with real tools for children to explore. Kivitiranta *et al.* (2024) discusses evidence which suggests that even access to outdoor environments with minimal natural plant life and elements of nature can support children’s development.

This is also discussed within Keep Wales Tidy (no date) which discusses the impact which was seen with the addition of planters and fruit trees within a Welsh school, which they hoped would add to the natural environment and wildlife habitats as they grow and develop. Keep Wales Tidy (no date) states that the school found the addition of this greenery provided real life, hands-on experiential learning opportunities both as they were planted and as they continue to grow and develop the area, enabling them to utilise the area to support many areas of their curriculum. This links to Froebel’s belief of children understanding about unity and connectedness as explored within Froebel Trust (no date a). Additionally, this links to the Belonging development pathway, supporting children to ‘take care of things’ in their environment (Welsh Government, 2024) as well as supporting them to develop into Ethical, Informed Citizens by exploring sustainability and the needs of living things, and growing to be knowledgeable about the world through nature.

Furthermore, Froebel Trust (2023) states that Froebel's belief of children learning through engaging with nature is central to creating Ethical, informed, citizens. Tovey (no date) also supports this and acknowledges the benefits that outdoors offer children in terms of allowing them to care for living things, for example bugs or planting.

Additionally, this link between theory, practice and policy is currently under investigation within research being conducted by Dr Clement as discussed by Froebel Trust (no date b). Within the study conducted by Froebel Trust (2023) children were observed to engage in activities that support them to become Ethically Informed Citizens, naturally, within a Froebelian approach setting. For example, combining sand and water and observing the differences to its form and how it behaves once wet. Furthermore, Froebel Trust (2023) discuss the experiences of the children while gardening and growing their own produce, allowing them to make links to nature and the care they provided, therefore their impact and allowing them to form their own understanding of how we are all connected. With that being said, a challenge to learning in nature, discussed within Kivitiranta *et al.* (2024), is the restrictions placed on children as to what they are allowed to do to explore their natural environment, for example picking flowers. This brings to mind whether or not children will be allowed to mix the sand and water, pick the flowers to explore and make potions and dig in the mud to find the bugs, by their enabling adults and if not whether this supports a connection with nature. Moreover, Kivitiranta *et al.* (2024) argues the need for practitioners who are able to foster and spark children's interest in nature and the environment.

Patchen *et al.* (2022) also support Froebel's belief that time spent in the outdoors creates environmental awareness in children. However, Patchen *et al.* (2022) and Hwb (no date) further argue that there are inequalities in the time spent outdoors between socio-economic groups, with the poorest children spending the least amount of time outdoors. With that said, they continue to argue that time spent outdoors while in settings or school could offset this disparity, and support child development. Moreover, Patchen *et al.* (2022) argue that screentime and urbanisation of areas is reducing the amount of time spent outdoors by preschoolers. Additionally, when asked about where they learn about nature, other than in school,

more than half of those asked within Nature England (2023)'s study stated they connected with and learned about nature on screens.

Johnstone *et al.* (2022) also discusses links between being outdoors and children's wellbeing stating that those from low socio-economic backgrounds tend to have the lowest well-being, which has impacts to their later adult life, and the importance of early intervention to support. Additionally, Molner *et al.* (2026) state that school settings are a good place to promote the benefits to health and well-being that can be felt through access to the outdoors and nature and can have a positive effect on later life health. Moreover, Hwb (no date) states that this places an importance in fostering the exploration of the outdoors within settings. This can be linked to Welsh Government (2024) Ethical, informed citizens who can understand the impact of their actions.

Furthermore, Welsh Government (2023) research suggests that outdoor learning supports children to explore their place in the world and foster a sense of "Cynefin" as is suggested by Welsh Government (2024) as well as outdoor learning encouraging pupil participation in learning. Moreover, the "Ethical, informed citizen" descriptor within Welsh Government (2024) states that children must develop to "understand and consider the impact of their actions when making choices and acting". Tinney (2023) discusses how the CfNMNS is written, with an emphasis on outdoor learning, and discusses the significance of not only the written elements of the document but the choice of setting for two thirds of the pictures within the document being outdoors in support of the importance of outdoor environments. Additionally, Dere and Gokcinar (2025) and Adams and Short (2025) suggest that bringing the natural world into settings also supports academic achievement in children.

However, Tovey (2022) and Cordiano *et al.* (2019) suggest that there is a growing disconnect between children and nature due to decreased access to the outdoors and wildlife. This is supported by Watts (2022) who discusses concerns around the lack of time spent by children accessing the outdoors and nature and suggests that this may be due to a change in habits and home environment over recent years. Additionally, Harding and Thomas (2020) report that it is difficult for children to access outdoor learning within current pedagogy. Within its study of children from

England, Natural England (2025) stated that 28% of the children surveyed stated that school settings were the only place that they had access to nature with 72% of children stating that time spent in nature meant that they found school more enjoyable. Additionally, 93% of those asked stated that ‘being in nature makes me happy’. This shows the importance of nature on children’s wellbeing and enjoyment of school. This could also raise the question if the children are happy in school, could their academic achievements improve. Nature England (2025) and Cordiano *et al.* (2019) state the important roles schools and settings play in providing that real-life, hands-on experience of nature to support children’s connection with the natural world, which some children may not otherwise have. However, Sakr and Kaur (2024) state that there is little evidence of Froebelian practice being taught as part of Early Years Education qualifications and training, although there are professional development courses which suggest that Froebelian principles should be influencing how we teach young children. With that said, Hwb (no date) provides professional learning modules for practitioners around embedding outdoor learning into practice and how this links with the successful implementation of the Curriculum for Funded Non-Maintained Nursery Settings, within which it acknowledges Fredrick Froebel and the importance of connection with nature.

Within small-scale research Cordiano *et al.* (2019) used a small sample of 26 children, 14 of which attended a traditional classroom-based setting while 12 attended a schools outdoor learning, nature-based nursery. This research found that children accessing the nature-based setting displayed better problem-solving skills and ability to engage in pretend play at the end of the school year, compared to those in the traditional setting, according to teachers' findings. However, there were limitations to this study, which were acknowledged by the authors, in that it is a small sample of children who are from affluent families with parents who mostly have high level of education. However, within their small-scale study in America, Cordiano *et al.* (2019) found that the children's attitudes towards nature were not significantly different when accessing a nature-based nursery setting versus a traditional classroom-based setting. Additionally, the importance of outdoor spaces and planning for time in the outdoors is recognised with in Welsh Government (2024) by recognising the need for carefully planned outdoor environments to encourage attention and listening and exploration of mathematical concepts. Moreover, being

outdoors forms part of the CfNMNS's pedagogy and it acknowledges that being outdoors provides children with opportunities to connect with the environment and form environmental awareness, aligning with Froebel's beliefs about children and nature. Additionally, Welsh Government (2024) states that the outdoor environment allows for children to develop their skills to achieve the four purposes. However, Johnstone *et al.* (2022) states that typical outdoor areas usually consist of man-made environments such as apparatuses and have a distinct lack of natural environments, which could provide natural opportunities for children to achieve the same objectives, for example climbing trees or sliding down mudbanks, which can offer risk that is also changeable with the weather and seasons.

Welsh Council for Outdoor Learning (2018) identifies the need for adventure and challenge within young children's outdoor environments and the need for a balanced risk management approach within one of its 5 themes and suggests that by providing well-structured and engaging outdoor learning opportunities, settings are contributing towards the 7 Wellbeing Goals set out in the Wellbeing of Future Generations (Wales) Act 2015 as well as providing opportunities to promote its fifth outcome - environmental awareness. This outcome promotes ensuring children are given regular opportunity to explore the outdoors in a range of different weather conditions, are allowed to explore the impact they have on the environment and sustainable development and take care of it and become naturally curious about the world, all of which link closely to the descriptors of Ethical, informed citizen purpose of the curriculum. This links to Froebel's belief that children develop with freedom to have lots of space to explore and move with whole bodies including risky and adventurous play (Tovey, no date). However, Sakr and Kuar (2024) state that there can be a tendency for freedom to be offered without enough guidance, which they discuss as being activities within Froebel's occupations and the need for resources which support this.

Furthermore, Tovey (2022) and d'Ascoli and Hunter (2022) suggest that Froebel believed that learning in nature also encouraged risk taking in play and fostered a sense of adventure through climbing, water play, den building as well as opportunities to explore creativity with symbolic representation and scientific and mathematical learning of forces, weight, balancing and so on. This is also supported by Johnstone *et al.* (2022) who states that risk taking is better supported by outdoor

activities. Smedsrud, Lenes and Moser (2026) further discuss the outdoor environment offering better opportunities that indoor environments for children to problem solve and become more resilient through risky or adventurous play.

However, Catucci, Berg and Arlemalm-Hagser (2024) discuss practitioner's adversity to allow risk as a barrier and state that practitioners can take on a supervision role, rather than enabling and enhancing learning opportunities. Play Wales (2025) states the importance of flexibility and provides tools for assessment of risk and the value of the environment.

Moreover, Patchen *et al* (2022) and Caglayan, Capar, and Zeteroglu (2024) discuss the need for practitioners' confidence in outdoor learning and planning for these sessions in order for children to get the most out of this time and experience. Furthermore, Patchen *et al* (2022) discusses the increase in priority placed on health and safety and fear of children's risk taking, with safety being one of the most prominent barriers discussed by participants in their small-scale study. It is important to note that their study was only conducted in one education 'district', within an urban area, in North America, and therefore perhaps not representative of the feelings of all practitioners, for example those in more rural areas who may more regularly spend time in the outdoors, although these barriers to generalising of data found are recognised by the authors. This is however additionally supported by Papadopoulou and Vincent (2025) who state that practitioners report lack of training and confidence as barriers to outdoor learning opportunities. Welsh Government (2023) calls for highly skilled practitioners to facilitate outdoor learning in order to support children to achieve their best through nature. Additionally, Welsh Government (2024) and Ellis *et al.* (2024) state that settings in Wales may not only require practitioner training but also practitioner willingness to support outdoor learning pedagogy. Furthermore, Ellis *et al.* (2024) calls for national uniformity in outdoor learning opportunities through professional development and clearer targets. Additionally, Ellis *et al.* (2024) discusses the potential for including more outdoor learning content within Initial Teacher Education as the coverage varies and therefore children being taught by newly qualified teachers and those who have not engaged in professional development may experience inequality in provision and teaching.

The importance of an enabling adult who can confidently offer support and guidance and risk taking as well as facilitating the engaging environments is discussed within Welsh Government (2024), therefore supporting the need for practitioners to be ready to facilitate risky play within their environments. Additionally, Froebel Trust (2023) discusses the enabling adult within a Froebelian setting, stating that they are able to support and scaffold but not direct learning, so that the children have autonomy. This view is supported by Papadopoulou and Vincent (2025) who's participants stated they felt that indoor learning was more structured where outdoor learning afforded children more autonomy with adults supporting only as necessary. Smedsrud, Lenes and Moser (2026), written from a Nordic context, which discusses the opinions of 5 practitioners from Norway, who are practicing in nature kindergartens in Norway, where nature is incorporated into the learning environments and activities for large portions of the day, states that practitioners are required to find a balance between allowing self-direction in children and teacher participation. However, participants within Dere and Gokcinar (2025), Papadopoulou and Vincent (2025) and Caglayan, Capar, and Zeteroglu (2024) discuss practitioners reporting a sense of lack of control felt while outdoors. Moreover, Papadopoulou and Vincent (2025) discuss the inappropriate nature of the outdoor environment to facilitate whole class learning, despite all participants acknowledging the benefits to physical and social development offered by the outdoor environment.

According to Welsh Government (no date) the CfNMNS was written by practitioners and experts to support children's development in the early years, with one theme for its professional learning modules being outdoor learning, to support practitioners to embed the principles of the curriculum and outdoor learning into their pedagogy. However, within research, Welsh Government (2023) found that practitioners were unable to link their outdoor learning session to the support it provides to explore the Ethical informed citizen purpose, which suggests that practitioners are either unclear of the purpose descriptor and how outdoor learning can support its development or are using outdoor learning as a different environment to deliver their lessons rather than learning with nature, as Tovey (2022) suggests Froebel believed supported development, demonstrating a need for practitioners training and development in outdoor learning.

However, Smedley and Hoskins (2018) and Harding and Thomas (2020) consider that one barrier to putting Froebel's approach into practice is the current obligations that are placed on settings for statutory assessments. Welsh Government (2023)'s survey found that practitioners believe that 'real work' happens within the classroom and that the outdoors was an unsuitable environment to perform assessments, and report pressures from the curriculum as a barrier to the successful implementation of an outdoor learning pedagogy. Furthermore, Smedley and Hoskins (2018) state that the current stance of being reliant on assessments and levelling children's learning to understand school performances, juxtaposes with this Froebelian approach. Additionally arguing that Froebel had no set curriculum, valuing children's autonomy, and supported observing children to understand where they were in terms of their learning in order for the enabling adult to meet them where they were and support when needed. This is also supported by Patchen *et al.* (2022) who discuss a reliance on performance over the understanding of the importance of play in the outdoors. The barriers placed on settings by curriculums is also discussed within Papadopoulou and Vincent (2025) who state that practitioners feel that the curriculums are too busy to support setting aside time for outdoor learning. Papadopoulou and Vincent (2025) conducted a small-scale qualitative study in England, with two settings, one urban and one semi-rural, with participants with a variety of experience with children and the outdoor learning approach. During the study it was observed that a more informal approach to teaching took place when outdoors, which allowed the practitioners to slow down and had a positive effect on the children. However, as is discussed within the study, this study was conducted with participants who wanted to reflect on their outdoor learning pedagogies and so, as is stated within the paper, the authors acknowledge that they were "speaking to the converted" and the views discussed are not able to be generalised as they may not reflect the beliefs of all practitioners.

Kivitiranta *et al.* (2024) also discusses other barriers to good implementation of outdoor learning, suggesting that teaching is not making the most of the opportunities to learn within nature as they are rather simply moving their indoor lessons to an outdoor environment, and mostly to facilitate physical education or science lessons. This is further discussed in Yacin and Erden (2025) who state that the in-class instruction traditional way of teaching, which is evident within UK

countries, often prioritises academic success over holistic development of children. Furthermore, continuing to argue that this historic way of teaching could make it difficult for practitioners to embed the pedagogy necessary to support outdoor learning, with the need for curriculums and practitioners to be adaptive to the environment, weather and culture of each individual setting, with a variety of approaches needed within countries to support the different geographical and sociocultural contexts of the area.

Additionally, Kivitiranta *et al.* (2024) discusses the weather as being a barrier to accessing the outdoor environment, especially with young children who are unable to dress themselves in weather appropriate clothing as this is time consuming to practitioners, and therefore off-putting to using the outdoors in inclement weather. This means that some children may not be accessing the outdoors and exploring the environment in a range of different conditions as is suggested.

To conclude, there is much written in support of children learning through a connection with nature in line with Froebelian principles, as well as how this aligns with the CfNMNS (Welsh Government, 2024). However, this paper has also highlighted a number of barriers to the successful implementation of outdoor learning to support connections with nature and aligning with the curriculum. These include practitioners' confidence, professional knowledge, willingness to adapt pedagogy and allowing risk and curiosity as well as curriculum barriers including time and priorities for assessment. Therefore, practitioners' pedagogy and the outdoor provisions and environments offered vary, dependant on the impact of these barriers and how settings choose to overcome these.

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