

Assignment ECAD7004

An exploratory case study on how School X's implementation of outdoor learning been received by the pupils in year 5.

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	Targets	What I have done in this assignment....
Target 1	Combine components of your assignment in paragraph form as opposed to multiple mini paragraphs which could be combined due to being related content.	I have limited my use of 'mini paragraphs' with the aim of creating a more flowing and coherent piece of writing. Relevant sentences are grouped together in one paragraph.
Target 2	Continue to develop your academic language ensuring to maintain professionalism at all stages.	I have developed my professionalism in my writing and excluded personal comments and opinions, sticking to third person across the entire essay (with the exception of the introduction).

Introduction

In this essay, I will be introducing the research question - 'How has School X's implementation of outdoor learning been received by the pupils in year 5.' The choice to investigate the subject of outdoor learning has stemmed from the Welsh Government's (2022) push for a curriculum focusing on the achievement of four core purposes. Outdoor learning falls under the core purpose 'healthy, confident individuals,' which advocates that pupils take part in more physical activities during school to improve confidence, wellbeing, and motivation (Welsh Government, 2022; Learning Through Landscapes). To aid in the achievement of the four core purposes, the Welsh Government (2023) recommends the implementation of twelve pedagogical principles (Welsh Government, 2023). In relation to outdoor learning, there are two key pedagogical principles to consider – 'means employing a blend of approaches including direct teaching,' and 'creates authentic contexts for learning' (Donaldson, 2015).

This topic has interested me because I am curious to understand whether or not outdoor learning nurtures a wholesome environment in the classroom. I will be researching a variety of theorists that advocated the use of the natural world in education and aiming to discover a recommendation based on my research.

I will be using School X as a base for my research because it is school that has effectuated outdoor learning into its curriculum with great determination. The school itself is located in the Swansea county, and in its last inspection, which took place in 2020, it received an 'excellent' in all inspection areas. Its one recommendation was to share good practice in teaching and learning across the school, with a direct comment pinpointing outdoor learning. The school taken this on board by creating a timetable in which each class gets outside at least once a week. The outdoor facilities include a sloping field, a small forest area with a pond, cabin and firepit, an outdoor area for the

reception and year 1 classes, and multiple tarmacked playgrounds for the pupils to use at break, lunch, and golden time (Estyn, 2020; Clarke, 2021).

Literature Review:

Outdoor Learning in the Curriculum for Wales

In more ways than one, the Curriculum for Wales aligns closely with the Froebelian principles. In Froebel's day, his ideas were thought of as dramatic in comparison to the mainstream style of teaching. In today's schools however, these principles are rightfully the norm. Two key strands of Froebel's philosophy are his ideas that children should be autonomous learners, free thinkers with a right to independence; and that children should be engaging with nature throughout daily life - in school as well as outside of school (Froebel Trust).

In Donaldson's (2015) 12 pedagogical principles, the first principle states that, 'Good teaching and learning maintains a consistent focus on the overall purposes of the curriculum.' The purpose of the curriculum is to enable learners in their strive towards the four purposes, which each express the importance of our pupils feeling independence, creativity and confidence in their learning (Donaldson, 2015). It is felt by the Welsh Government (2023) that the outdoors are imperative if schools wish to succeed in this strive.

The Welsh Government (2023) recognised the significance of outdoor learning during the Covid-19 pandemic in relation to the health and wellbeing of pupils. Outdoor learning has been found by the Welsh Government (2023) to increase pupils' engagement and zeal for learning. In addition for this, the Welsh Government (2023) discovered that more time spent outdoors improved pupils' sense of responsibility for the care of the environment (Welsh Government, 2023) (Williams, 2022).

Outdoor activity, as averred by the Welsh Government (2023) and Ofsted (2023), also provides pupils with the authentic contexts for learning that will greatly enhance their learning experience (Ofsted, 2023; Welsh Government, 2023). If one recalls, authentic contexts for learning is another of Donaldson's (2015) 12 pedagogical principles that aids in the achievement of the four core purposes

(Donaldson, 2015). In addition to this, authentic contexts for learning has been identified as a key factor in encouraging the development of 'cynefin' in schools.

A push for cynefin – the feeling of belonging and community, specifically within Wales – can be found ubiquitously across the Curriculum for Wales. Estyn (2023) writes that, 'Imaginative use of the 'Cynefin' enables pupils to learn in authentic contexts,' which as stated above – greatly enhances the learning experience for pupils. In relation to cynefin, outdoor learning has a great influence; providing children with the opportunity to connect with the Welsh natural world and to kindle an interest in Welsh heritage (Welsh Government, 2022; Estyn, 2023).

Outdoor Learning in Days Past

In 1899, Dewey publicly rejected traditionalist schooling – which can be determined by the use of recitation and dictation in classrooms full of rows of sorrowful children. His new philosophy of education encouraged the use of experiential and experimental learning (Ord and Leather, 2011; Guardian Angels Roman Catholic Primary School). Pupils who are exposed to the complexities of the natural world develop a greater appreciation and care for it (Gibbon, 2019). One might connect this with Kolb's (2014) reputable experiential learning theory. According to Kolb (2014), experiential learning is the process of reflecting upon experience - using concrete experiences to prompt reflective considerations, which lead to enlightened ideas and ultimately resulting in active experimentation (Kolb, 2014). Experiential learning, in the eyes of Ord and Leather (2011), is the essence of outdoor learning (Ord and Leather, 2011; Norwich University).

Hattie et al (1997), refer to Plato; writing that Plato deemed physical education as more than just a means to enhance physical skills, but perhaps more so, a means to enhance the mind. Although written upwards of 20 years ago, Hattie's (1997) research further confirms the positive impact that outdoor activity, and experiential learning, have on the mind. During his research, he found outcomes of increased independence, confidence, self-control, and better self-regulation (Hattie et

al, 1997). Yildiz (2022), in a similar research study over 20 years later, observed parallel results.

Attributes such as increased environmental awareness, problem solving skills, personal development, and self-confidence were among those that pupils reinforced (Yildiz, 2022).

The Strengths and Limitations of Outdoor Learning

Concerns about the Welsh weather and its tendency to be on the wetter side have been raised and considered. It has been found that, for the pupils to remain safe and secure, more protective clothing is needed for outdoor learning and forest schools in Wales; however, this poses potential barriers for children who don't have the means to access such clothing (Welsh Government, 2023). A further barrier that many schools are faced with, particularly for schools in the bigger cities of Wales, is the lack of outdoor space (Learning Through Landscapes).

Sjöblom et al (2023) divulge that student teachers in Norway and Finland question the profits of outdoor learning; expressing a negativity towards the Froebelian principle of engaging with nature, stating it to be time consuming, and requiring hefty planning and preparation, not to mention the additional anxieties regarding behaviour management. Similarly to the Welsh concerns, the weather and lack of appropriate clothing play a significant factor in the delivery of outdoor learning. In a case study, the same student teachers found the whole concept demanding and problematic (Sjöblom et al, 2023).

Kiviranta et al (2024), in contrast, give voice to the positives of outdoor learning, writing that studies indicate that nature and time spent outdoors directly results in healthy development and increased learning. They write that natural surroundings have been shown to calm individuals, prompting creativity and positivity. In addition to this, the open environment cultivates a sense of autonomy, which in turn results in increased self-confidence and more favourable behaviour – benefitting the mood of whole class (Kiviranta et al, 2024). Cameron and McGue (2019) support this by writing that

concentration, behaviour, and mood are all positively affected by time spent in nature (Cameron and McGue, 2019).

Also in opposition with Sjöblom et al and their misgivings about the advantages of outdoor learning, the Welsh Government (2023) have written that outdoor learning in fact becomes a means to enrich the subjects normally delivered within the classroom (Welsh Government, 2023).

Case Study

What is Case Study Research?

A case study approach is adopted when it becomes necessary to obtain a more detailed analysis of a distinct situation. It is one of the most commonly used strategies to gather forms of qualitative data when conducting research on a social unit. Schoch (2020) describes the case study approach as being the investigation of an occurrence within a larger context. In this assignment, the occurrence is the consequence of outdoor learning, and the context is School X. It is stated by both Schoch (2020) and Yin (2018) that case studies need multiple sources of data for evidence; for the case study itself is not a method of data collection, but rather a game plan stating how one will gather the relevant data (Schoch, 2020; Yin, 2018).

The Purpose of a Case Study Approach

In continuation of the above, case studies are conducted when a phenomenon requires an in-depth study with multiple forms of data collection. Possible methods of data collection include surveys or questionnaires, observations, and interviews. The overarching purpose of the case study approach is to synthesise a phenomenon to create a more accessible set of results for a larger population (Schoch, 2020).

With reference to Yin, Priya (2020) defines three types of case studies. A descriptive case study has the purpose of describing a phenomenon within its real-world context, an explanatory case study looks to explain the phenomenon using the questions 'how' and 'why' to investigate cause, and an exploratory case study has the ambition to discover new research questions that may further contribute to the field (Priya, 2020).

Strengths and Limitations

A welcomed strength of the case study approach is its ability to aid the researcher in their understanding of a phenomenon. Its process is a straightforward one, and iterative in nature, which provides the researcher with the sound knowledge needed to form a recommendation or final conclusion (Hollweck, 2016). It is also a thoroughly descriptive approach due to the fact that it synthesises material from multiple sources. However, as Yin (2018) shares, it has been suggested that the case study approach is not enough of a systematic procedure, and this results in unmethodical work at the hands of the researcher (Yin, 2018).

An additional concern regarding case studies is the lack of reliability. The researcher may have an emotional involvement with the area being studied, which could result in biased or fabricated evaluations. That being said, the case study approach allows for the inclusion of multiple studies, and perspectives, of the same situation. This aids to ensure a less biased outcome, for the researcher must use a triangulation method to converge the data; subsequently eliminating errors and biases (Quintão et al, 2020; Hancock et al. 2021; Hollweck, 2016; Yin, 2018; Priya, 2020).

Who are the Participants?

In this particular case study, the exploratory method was undertaken. As stated in the research question, the primary participants were the pupils of School X, the year 5 class to be precise. Due to the large number of pupils in School X; there are two year 5 classrooms, with upwards of 50 children between them. This number was narrowed down to 30 after the consent forms were distributed and returned.

Research Methods

Interviews as a Research Method

A prevailing method of data collection for a case study is the interview approach. This approach is used to gather qualitative data, which is defined by Mezmir (2020) as “the classification and interpretation of linguistic (or visual) materials.” To briefly clarify, the aim of qualitative data collection is to arrive at an articulated summary through the describing and comparing of said linguistic and visual materials (Mezmir, 2020). According to Gill et al (2008), an interview’s primary objective is to traverse a topic through the discussion of experiences and opinions. To obtain this information, three elementary forms of interview exist within the research world – structured, semi-structured and unstructured (Gill et al, 2008).

Strengths and Limitations

One of the leading strengths of the interview process is its liberty for variation and elaboration during the questioning. In comparison to a questionnaire, which contains pre-planned and unyielding questions, an interview allows for on-the-spot differentiation – providing it is following a semi-structured format. The semi-structured format incorporates a series of pre-planned questions to be used as prompts, but in comparison to a structured interview, there is flexibility for the interviewer and participants to further reflect and follow interesting viewpoints (Ruslin et al, 2022).

Unstructured interviews on the other hand, are discouraged due to their lack of organisation and direction. Gill et al (2008) reflects on their tendency to be time consuming, which without direction, can lead to an undesirable standstill in the research (Gill et al, 2008).

Hancock et al (2021) communicate the advantages and disadvantages of individual interviews in contrast to group interviews. On one hand, an individual interview may generate a significant

amount of unbiased information – uninfluenced by other opinions, but on the other hand, a group interview benefits from the sharing of ideas, and welcomes prompts from all the participants as an ensemble. From another point of view, an individual interview may be the more time-consuming option, but group interviews run the risk of excluding various perspectives, especially if those perspectives go against the majority (Gill et al, 2008; Hancock et al, 2021).

What This Process Involved

In response to the research question, the semi-structured interview approach was chosen, in the interest of providing the participants with an approximate direction for their answers. Gill et al (2008) define the interview method to be a questionnaire communicated verbally, rather than in writing. However, contrary to a questionnaire, a semi-structured interview is encouraged to be comprised of only open-ended questions (Gill et al, 2008). Hancock et al (2021) discourage the use of leading questions; for example, questions that may be responded to with a simple yes or no - for they are likely to produce distorted answers. Open ended questions also allow the interviewees to pilot the conversation, which is far more beneficial than a monotonous soliloquy from the interviewer (Hancock et al, 2021).

Due to the age of the participants, a selection of 10 open ended questions were asked using understandable terminology - Ponizovsky-Bergensen. et al (2019) specifies the importance of this. As the year 5 classes have a combined number of 59 pupils, among which only 30 provided consent, it was not possible to carry out individual interviews. So in lieu, 6 group interviews were carried out with 5 pupils per group. The groups were delicately chosen to separate friendship circles, and to ensure that no cluster had a figurehead to monopolise the discussion (Ponizovsky-Bergensen et al, 2019).

Questionnaires as a Research Method

In addition to the interview method, another favoured form of data collection is the use of a questionnaire. The above concentrated on the assemblage of qualitative data, which is a much more philosophical route for research. A meticulous case study however, needs the addition of quantitative data to ensure a conclusion free from bias (Yin, 2018). A questionnaire following the quantitative route involves the use of multiple-choice questioning, which, unlike the semi-structured interview, can only be answered with a yes or a no, or by using a rating scale. Quantitative questionnaires require a format akin to a bar chart for the presentation of its results (Schoch, 2020).

Strengths and Limitations

Perhaps the most noteworthy of strengths possessed by the questionnaire method is its capacity to gather information from a large number of people in a short amount of time. Lambert (2019) highlights the manner in which a questionnaire can collect quantitative data that may be analysed and defined through statistics. Lambert (2019) also adds that a questionnaire is especially advantageous when one wishes to acquire good surface knowledge of people's views on a topic (Lambert, 2019).

Fischer et al (2020) look upon questionnaires with a touch of despair, dubbing them to be too relied upon in the research realm, almost with a demeanour of carelessness. They find questionnaire responses to be manufactured, with a lack of real-world dynamic. There is also a concern that meaningless results will be produced due to erratic analysis – for how can one assess tone accurately in the written word (Fischer. et al, 2020.)

What This Process Involved

Taking the limitations above into account, a quantitative format was used in the designing of this questionnaire – 6 multiple choice questions, including a scale to gauge pupil enjoyment of outdoor learning. This approach was chosen in order to gain auxiliary results with better structure for analysis, in comparison to the qualitative data collected during the interviews.

As Lambert (2019) reminds us, questionnaires can be excluding for those with poor literacy skills; with this in mind, the questions themselves were basic in nature, written for the age group and level of attainment within the class. However, it was recognised beforehand that the responses to this questionnaire would provide a valuable foundation for further study, so their basic nature was in actuality an asset, rather than a hindrance (Lambert, 2019).

Data Presentation and Analysis Methods

Analysing Qualitative Data

Rodríguez-Dorans and Jacobs (2020) propose a narrative approach for the review of qualitative data. Similarly to thematic analysis, the narrative approach seeks to find meaning in the words used by the participants. However, this approach is less concerned about the identification of patterns and repeating themes in texts and transcripts, and more with the description of events in context – which differentiates it from thematic analysis (Cote, 2021, Rodríguez-Dorans and Jacobs, 2020). Instead, Jnanathapaswi (2021) advises the use of thematic analysis to combat the tedious nature of organising qualitative data. This includes the coding and categorising of consequential themes in data to form an understanding of the research collected. For this reason, it was decided that the thematic analysis approach would be employed to assess the data collected during the interviews. This was completed by following the six steps for thematic analysis, which allowed for the systematic pinpointing of possible themes (Jnanathapaswi, 2021).

Analysing Quantitative Data

Cote (2021) promotes descriptive analysis as a means to decipher quantitative data. Descriptive analysis may imply a lack of statistical interpretation; however, Cote (2021) writes that data visualisation is the most fitting data presentation method to pair with the descriptive analysis approach. For descriptive analysis is actually the process of identifying trends in a pictorial way. Visual images can clearly show the trends in data in a way that's understandable for all. In view of this, the data collected through the questionnaires was interpreted using the descriptive analysis method and will be presented further on using 7 statistical diagrams (Cote, 2021). The statistical diagrams will then be discussed in relation to the research question.

Ethical Considerations

Consent, Anonymity and Confidentiality

When considering the potential risks for participants, and the possibility of a breach in the university's code of ethics, two predominant possibilities were identified, along with a collection of additional considerations.

In the initial planning of this assignment, it was soon decided that the most optimal methods for data collection would be questionnaires and semi-structured interviews.

Prior to the fabrication of the questionnaires, a consent form was sent to the parents of the participants to gain the necessary parental consent. It was asked that the parents only respond to the questionnaire if they did not wish for their child to take part. The consent form can be found in Appendix 2 of the appendices.

The Ethical Guidelines publication, written by BERA (2019) and referenced in the writing of the University of Wales Trinity Saint David's Ethics Form (found in Appendix 1 of the appendices), was consulted foregoing the writing of the consent form. The guidelines on consent made one aware of the need to be completely transparent to potential participants about the nature of the research. It was also necessary for the participants, and guardians of such, to be informed of the anonymity and confidentiality of the data collected during the interviews and questionnaires. In an open manner, the consent form clearly laid out the motives of the research, how the data would be collected, how it would be used, and the guarantee for pupil anonymity and confidentiality.

All pupils were instructed to leave their questionnaires unnamed, to ensure anonymity regarding their responses. The questionnaires were completed on paper, which will be destroyed proceeding the results of the assignment (BERA, 2019).

Pupil Assent

BERA (2019) highlights the need to remember that each participant has the right to withdraw themselves from the research at any time, even if a positive response to the consent form has already been received priorly. In acknowledgment of this, the pupils were made aware of their prerogative to remove themselves from the questionnaire or interview processes - without needing to present a justification (BERA, 2019).

Additional Considerations

It is made known by BERA (2019) that all researchers have a responsibility to the participants during a research investigation. It is underlined that all contributors are to be treated with equity, and with heed to their rights.

With this in mind, additional factors needed to be considered regarding ethical conduct during the research process. These considerations were as such: partiality during the interview process, and the possibility of bias towards preconceived ideas.

To remedy partiality during the interview process, it was made known to the participants that all contributions to the questions would be welcomed and listened to with undivided attention. No pupil was left out of the process unless they personally withdrew themselves.

As for bias towards preconceived ideas, it was made sure that the questions showed no proclivity towards the positive or negative perspectives of outdoor learning, each question was neutral and open to interpretation from the participants (BERA, 2019).

Discussion of Results

Analysis of Qualitative Data: Using Thematic Coding to Find Key Patterns in Interview Responses

As shown by Jnanathapaswi (2021), there are six steps to the thematic coding process. Step six begins here, with the final analysis of the themes with regard to the overarching research question.

Theme 1: Weather

Discussions regarding the influence of weather on outdoor learning were frequent during each of the interviews. It was discussed earlier that bad weather is often a leading cause for the dislike of outdoor learning, for both teacher and pupil (Learning Through Landscapes; Welsh Government, 2023). Pupil's divulged that they strongly dislike being outside in rain during school hours because they feel wet and cold both during the lesson, and for the rest of the day. When the weather is dry or sunny though, the pupil's enjoy nothing more than to be outdoors. It was relayed that the most enjoyable lessons to do outdoors are those that incorporate an aspect of adventure and experience.

Theme 2: Freedom

Pupils admitted that they feel freer during outdoor lessons; without the constraint of a desk, or the need to write copious amounts of words to feel successful at the end of a lesson. Many of the pupils feel that it's calmer outside compared to inside the classroom, because there's more space to move around, and they're also allowed to move around – unlike in the classroom. The pupils value this trust given to them outside, the freedom satisfies their need to release energy. Cameron and McGue (2019) vocalised this concept by writing that outdoor settings can stimulate the mind and bring about increased concentration and motivation (Cameron and McGue, 2019).

Analysis of Quantitative Data: Using Descriptive Analysis to Interpret and Organise Questionnaire Responses

Descriptive analysis was undertaken to interpret the questionnaire responses. First and foremost, the responses were transferred from the written questionnaires into Excel. Once the numbers were recorded, they could then be converted into visual representations – bar charts, pie charts, and line graphs.

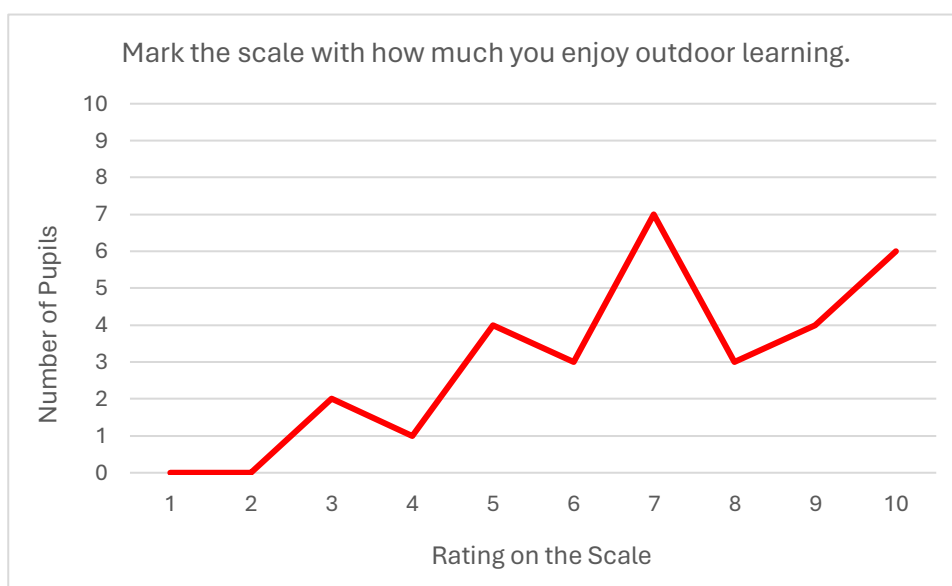


Figure 1: Line graph showing pupil enjoyment of outdoor learning.

Figure 1 corresponds to question 1 on the questionnaire. The full questionnaire template can be found in Appendix 4 of the appendices. It can be seen here that a higher number of pupils enjoy outdoor learning rather than dislike it, with a distinct peak at rating 7. When paired with *Figure 2*, it can be seen that although the majority of pupils enjoy outdoor learning, to 87% of pupils, it still feels like learning.



Figure 2: Pie showing the percentage of pupils who still feel that outdoor learning is learning.

The results from questions 3 and 4 of the questionnaire have been combined to better display the changing responses. Question 3 asked the pupils if being outside put them in a better mood, to which 90% responded yes and 10% no. Yet for question 4, which asked - 'Even in the rain?', the responses changed rather dramatically to 53.33% responding yes, and 46.66% responding no. Figure 3 visualises the fact.



Figure 3: Bar chart revealing the dramatic change in responses between questions 3 and 4.

To follow on from this, question 5 asked the pupils to choose their favourite weather from a selection of 4. Predictably, 50% of pupils chose sunny, followed by 33.33% of pupils choosing cloudy. This is consistent with the results in figure 3, revealing that the weather is a significant factor in outdoor learning enjoyment.

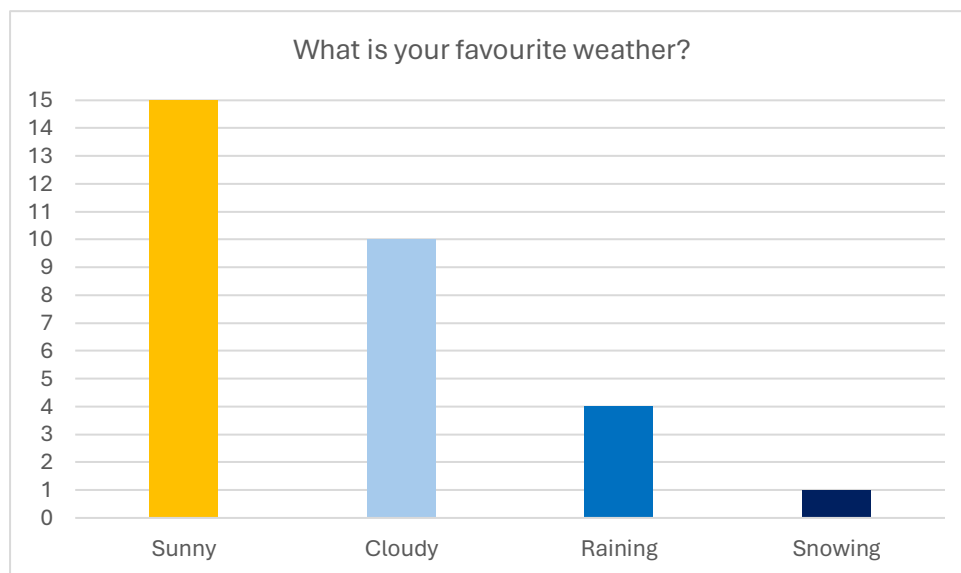


Figure 4: Bar chart presenting the favourite weathers of pupils in year 5.

The last question asked the pupils to choose their favourite subject to do outside, and interestingly, there was a distinct correlation between pupils who enjoy outdoor learning and picking P.E, and pupils who don't enjoy outdoor learning and picking art. Firstly, Figure 5 presents the data collected from the 30 questionnaire responses. It can be seen that the favourite lesson to do outside is unsurprisingly P.E. However, the largest percentage of pupils chose the 'other' option, for which the pupils cunningly added the entry, 'play.'

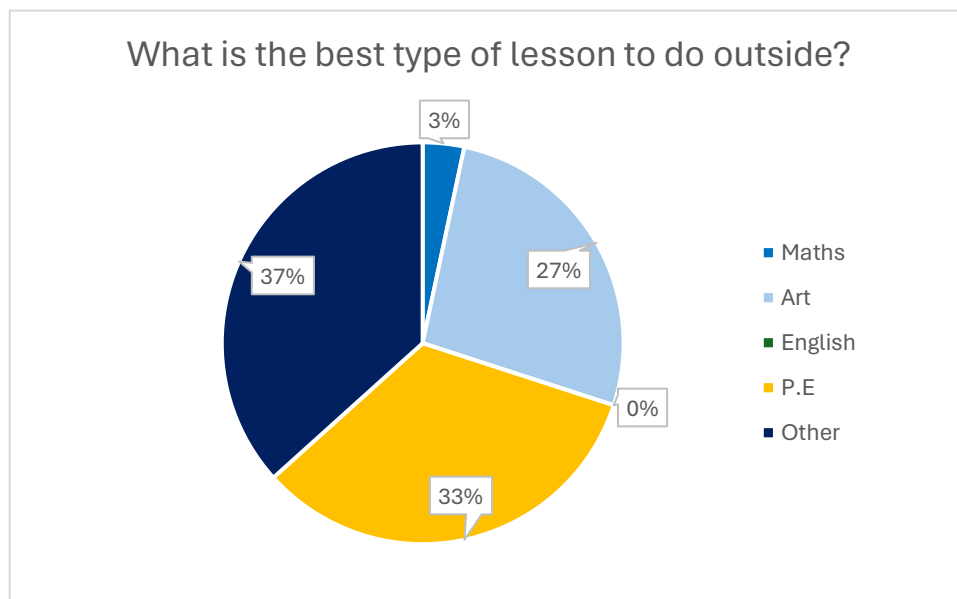


Figure 5: Pie chart exhibiting the favourite subjects of the pupils in year 5.

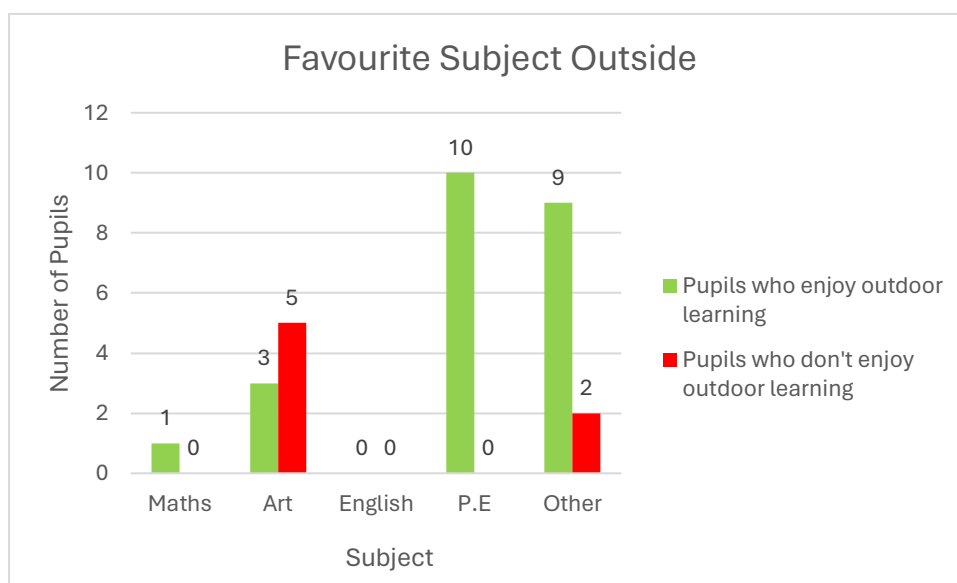


Figure 6: Bar chart detailing the difference in favourite subjects (to do outside) between pupils who enjoy outdoor learning, and pupils who don't.

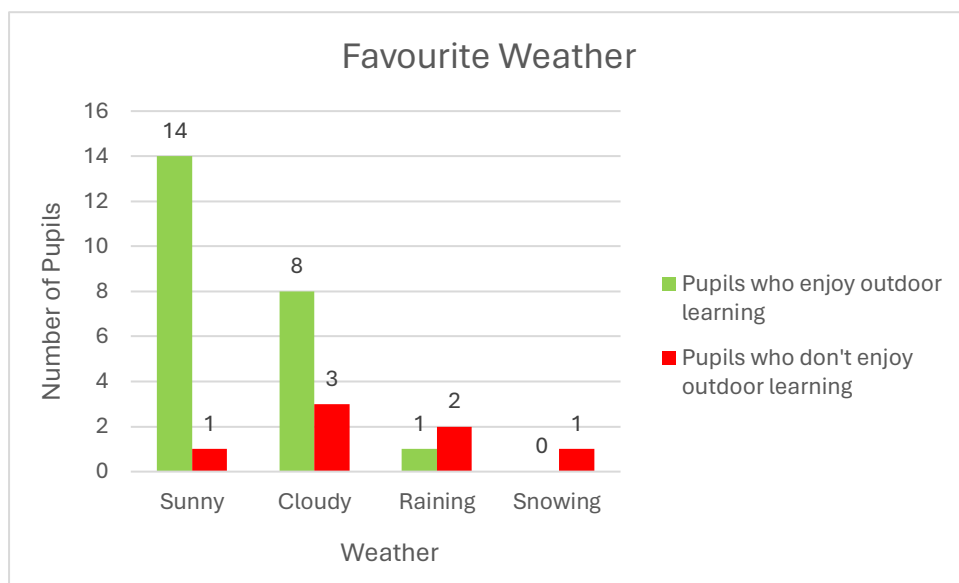


Figure 7: Bar chart detailing the difference in favourite weathers between pupils who enjoy outdoor learning, and pupils who don't.

As one can see, there is a significant difference in the choices of weather and subject between pupils who enjoy outdoor learning and pupils who don't. When regarding favourite subjects to do outside; pupils who enjoy outdoor learning favour P.E and play, but pupils who don't enjoy outdoor learning favour the arts.

Similarly with the weather choices, pupils who enjoy outdoor learning would rather be in the sun, but pupils who don't enjoy outdoor learning would prefer the weather to take a more shaded turn.

Conclusions and Recommendations

If one was to answer the research question in a sentence, based on the case study research, the sentence would say: the pupils in year 5 at school X have received the implementation of outdoor learning with great positivity. The pupils themselves relayed in simple utterances that they feel freer and more trusted in the outdoor classroom. This was a predicted phenomenon by both Hattie (1997) and Yildiz (2022), who proclaimed that outdoor activity increases independence and self-regulation, nurturing classrooms with a positive aura (Hattie, 1997; Yildiz, 2022).

An important discovery to consider post research is the consequence of weather on class morale. Although the percentage of pupils who dislike outdoor learning is lower than the percentage of pupils who enjoy it, their voices must be heard. Gibbon (2019) wrote that pupils who spend more time in nature grow a better appreciation for its intricacies. Perhaps a compromise can be met through the artistic study of environmental studies (Gibbon, 2019).

Recommendations

As it was found through the thematic analysis that a significant number of the pupils find the quality of outdoor learning to be greatly affected by the weather, the researcher's recommendation follows a route to tackle this. The last sentence of the previous paragraph is essentially what needs to be done. Poor weather and outdoor learning should not be incompatible, but rather complementary, working in harmony to provide a more exhilarating learning experience. For example, the rain may be used to teach about hydrodynamics, the water cycle, shelter building, and refraction. The weather may be used as a way to enhance authentic contexts for learning, which is one of Donaldson's (2015) 12 pedagogical principles (Donaldson, 2015).

It may be linked back to the Curriculum for Wales with regards to the push for cynefin. If one remembers, Estyn (2023) advocated the use of cynefin – through outdoor learning – to create superlative authentic contexts for learning (Estyn, 2023).

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