

# Howard gardners theory of human intelligence education essay



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This assignment will critically discuss the topic of integrated learning in the early primary curriculum with reference to the use of the outdoor learning environment. It will be based on my personal research that stemmed from the curriculum.

Firstly, this assignment will discuss the outdoor learning day, which incorporated learning outdoors with a topic themed activity. Secondly, the assignment will discuss integrated learning and outdoor learning in relation to the foundation subject Design and Technology.

Howard Gardner's theory of human intelligence, suggests there are at least seven ways that people have of perceiving and understanding the world. Gardner labels each of these ways a distinct "intelligence" in other words, a set of skills allowing individuals to find and resolve genuine problems they face. Within the Curriculum, traditional schooling heavily favours the verbal-linguistic and logical-mathematical intelligences. Gardner suggests that a "more balanced curriculum that incorporates the arts, self-awareness, communication, and physical education" (Gardner, 1999) is needed.

### **Brief outline to the project.**

The project theme which was chosen was that of habitats and materials with reference to The Three Little Pigs, as this was a popular story that we all knew well and thought we could do a great deal to facilitate children's learning across the age ranges of the school. We collaborated as a group and decided the story could be changed and saw it possible to have a good link to the outdoor environment leading to using the natural environment to build habitats. We adapted the story to relate directly to the natural environment

by The Three Little Pigs building their homes from twigs, leaves and mud as we thought this would be more beneficial and support questioning and investigation.

Within the discussion we chose a shaded area in the school grounds to set the scene for our performance and we believed this would then help with the 'wow factor' of the introduction to the activity. The most successful aspect of the session was, once we had gained confidence and had run through the activities with the children, this allowed us to reflect on what was working and the timing of the session. This enabled our group to adapt our idea and allowed us to engage the children more successfully. The children showed positive reactions when building homes for animals from outdoor resources (sticks, mud, leaves etc), however the session at the beginning was not as successful as we were not sure on timing, in which the initial group finished the set task earlier than expected. We then had adapted our intentions to create new extension activities for the children to do and we decided to carry out a hunt for other items to go in the homes we had made. From this experience we had to discuss ideas for other activities we could develop if this timing issue reoccurred.

I was surprised how engaged the children were when we were performing the story of The Three Little Pigs. Some of the ideas children came up with when building the homes were unexpected such as making sure the home was waterproof and the creative thinking they used to do this, for example; "we need to build underground or in a sheltered spot" and they also suggested, making sure that the roof was covered in leaves to keep the animals warm, dry and camouflaged.

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From the Outdoor Learning Day we collaboratively discussed where we could take the theme of materials and habitats. After a long discussion we decided to draw on our personal talents within the foundation subjects and use them to develop lesson plans and resources. I decided to opt for Design and Technology, as I find this subject interesting and feel that it has a wide scope for learning. The National Curriculum proclaims that, “ During Key Stage One pupils learn how to think imaginatively and talk about what they like and dislike when designing and making. They build on their early childhood experiences of investigating objects around them. They explore how familiar things work and talk about, draw and model their ideas. They learn how to design and make safely and could start to use ICT as part of their designing and making.” (National Curriculum 1999)

### **The main content area of the project.**

Integrated Learning is discussed and used with alternative phraseology such as Topic Based Work, Cross Curriculum and Creative Curriculum. In research, Integrated Learning studies are stated as “ Opportunities to enrich and enhance children’s learning and make connections across the curriculum” (Rose 2009). Ofsted’s grade descriptor of an outstanding curriculum states: “ The school’s curriculum provides memorable experiences and rich opportunities for high-quality learning and wider personal development and wellbeing. The school may be at the forefront of successful, innovative curriculum design in some areas. A curriculum with overall breadth and balance provides pupils with their full entitlement and is customised to meet the changing needs of individuals and groups.” (Rose 2009). The National Curriculum for Design Technology suggests that it “ provides opportunities to

promote pupils' spiritual, moral, social and cultural development." (National Curriculum 1999) There are highly tailored programmes for a wide range of pupils with different needs. Cross-curricular provision, including literacy, numeracy and ICT, is mainly outstanding and there is nothing less than good. As a result, all groups of pupils benefit from a highly coherent and relevant curriculum which promotes outstanding outcomes." (Rose 2009)

The Qualifications and Curriculum Development Agency (2010) explains " The new curriculum is based on what is already happening in many schools to bring learning to life, and the structure reflects what other successful countries are doing with their national curricula." (Qualifications and Curriculum Development Agency 2010). A quality curriculum should be " broad and balanced" a statement which was highlighted in the Education Reform Act 1988. Curriculum differs in each country, for example in New Zealand Te Whariki was developed by May and Carr to become the first national early childhood curriculum in New Zealand. This curriculum adopts a specifically socio-cultural perspective on learning that recognises the different social contexts in which children in New Zealand live and the social and interactive nature of learning. Carr and May (2000), discussed that the aim was the ' development of more complex and useful understanding, knowledge and skill attached to cultural and purposeful contexts'.

**As discussed in Wood's (2005) book " Play, Learning and the Early Childhood Curriculum," the Reggio approach, from Italy, has developed a distinct pedagogy that places the emphasis on using multiple forms of expression and cross curricular links in learning to help children communicate their understanding and thinking, maintain their interest and explore to give value to activities."**

**Practitioners see themselves as guides who are learning with the children and adopt a listening role that seeks to encourage thinking, negotiation and the exploration of difference, particularly in collaborative group work.**

**Documenting the process of exploration as children work through a project is a key pedagogical activity which offers children a record of their process and progress through the project, and gives educators a detailed insight into children's activities and learning." (Stephen, C. 2006). Reggio has developed the idea that children will develop their capacity to think, build and test theories through exploration and making links with prior knowledge and subjects. The Reggio approach believes that content knowledge is secondary to learning about how to learn, although specific contexts and bodies of knowledge may be the focus of the children's investigations.**

" Cross-curricular work offers a creative way to incorporate all strands of learning, developing the knowledge, skills and understanding of students while motivating them to learn through stimulating, wide-ranging and interconnected topics."(Wood 2005). It is particularly important to emphasise links between subjects to help children make sense of what they are learning. Cross curricular links are crucial to learning as learning depends on being able to make connections between prior knowledge and experiences

and new information. Such connections help us make sense of our world and develop our capacity to learn. The human brain increases capacity by making connections with prior experiences which can be related to, therefore it is a crucial part of education to include experiences which the children can make their own connections. Within the curriculum the “ process of design may have wider applications in a future curriculum which will embrace features such as “ creativity” on a more intensive scale. Outdoor learning offers many opportunities for learners to deepen and contextualise their understanding within curriculum areas, and for linking learning across the curriculum in different contexts and at all levels.” (Parkinson 2010)

Research into this comes from the Primary Review which is a wide-ranging and independent enquiry into the condition and future of primary education in England. The review began in October 2006 and continued for two years, an interim report published in December 2007 on children’s learning emphasises the importance of thinking skills: ‘ Children think and reason largely in the same ways as adults, but they lack experience, and are still developing the ability to think about their own thinking and learning (meta-cognition). They need diverse experiences in the classroom to help them develop these skills. Learning in classrooms can be enhanced by developing meta-cognitive strategies.’ (Primary Review 2007) This development in the early years of children is important because of the large amount of brain growth that occurs in the first six years of life. It is vital that thinking skills are nurtured and developed in the early years to support more comprehensive learning when children are older. Teaching ‘ thinking skills’ to older children is a valid technique, however helping young children to

develop these skills as they play is even more effective. From this it was also found that Cross Curricular Learning is a vital way to support children's learning and will aid in progressing development in the classroom. Piaget's theory is based on the idea that the developing child builds cognitive structures-in other words, mental " maps," schemes, or networked concepts for understanding and responding to physical experiences within his or her environment. This can be reinforced by learning through Design and Technology in school which enables pupils to; " appreciate the made world, the environments in which they live and work, the products they know about and use and the many communication systems that exist." (National Curriculum 1999)

Making links between subjects also helps pupils to learn more effectively as it offers opportunities to apply skills and knowledge in meaningful and purposeful contexts. For example experiencing and describing processes in geography and science offer children relevant experiences and enhanced understanding. Strong links such as these can enhance learning in all subject areas as they help learners see the relevance, within a wider context, of the skills and knowledge they are acquiring in specific subjects. Since the cross-curricular nature of Design Technology needs to involve teachers working in collaboratively to ensure children have progression in their learning and development . This means creating and organising a structure for the management of Design Technology work and, for the effective organisation particularly in the planning and implementation stages which are crucial to its success. In relation to this concept, Palmer and Doyle discussed ' Education is not just learning knowledge and skills, but the development of



children's learning capacity. Education is the development of thinking clearly and creatively, implementing their own plans and communicating their ideas to others in a variety of ways.' (Sue Palmer and Galina Doyle, 2004) In support of this, making cross curricular links can help learners recognise how they are learning, such as was discovered in constructivist learning theory "Constructivist Learning Theory promotes learner-centered study under the guidance of teachers. It has an important role in training students with the innovative capability and subject consciousness, while improving their qualities in human culture as well as in the ideological and ethical standards"( TIAN Ye 2010). There are certain aspects of learning – such as problem solving, reasoning, creative thinking – that are used across the whole curriculum. During cross curricular work teachers can help learners recognise these underpinning skills and how they are used in different contexts. The Design Technology National Curriculum demonstrates that, "Opportunities for teaching and learning all these skills across the key stages can be identified when planning. Pupils can be encouraged to reflect on what and on how they learn, and how these skills can be applied to different subjects, different problems and real-life situations." (National Curriculum 1999) Recognition is an important step towards using such skills in a strategic, flexible and intentional way. Learning is enhanced by learners being aware of how thinking and learning occurs, which gives them increased control over their learning, however coherence must be taken into account to ensure lessons are taught with a meaningful outcome.

Social constructivism is a variety of cognitive constructivism that stresses the nature of a broad range of learning. Vygotsky was a cognitive theorist,

but rejected the assumption made by other cognitivists such as Piaget and Perry that it was possible to separate learning from its social context. He argued that all cognitive functions originate in, and must therefore be explained as products of, social interactions and that learning was not simply the incorporation and accommodation of new knowledge by learners; it was the process by which learners were integrated into a knowledge community. According to Vygotsky:

“ Every function in the child’s cultural development appears twice: first, on the social level and, later on, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals.” (Vygotsky 1978 p. 57)

Vygotsky accepted Piaget’s claim that learners respond not to external stimuli but to their interpretation of those stimuli. However, he argued that cognitivists such as Piaget had overlooked the essentially social nature of language. As a result, he claimed they had failed to understand that learning is a collaborative process. Vygotsky distinguished between two developmental levels (Vygotsky 1978 p. 85) The level of potential development, the “ zone of proximal development” is the level of development that the learner is capable of reaching under the guidance of teachers or in collaboration with peers. The learner is capable of solving problems and understanding material at this level that they are not capable of solving or understanding at their level of actual development. The level of potential development is the level at which learning takes place. It comprises <https://assignbuster.com/howard-gardners-theory-of-human-intelligence-education-essay/>

cognitive structures that are still in the process of maturing, but which can only mature under the guidance of or in collaboration with others.

Similarly in Literacy from the National Curriculum it is stated that children should; “ talk about matters of immediate interest. They listen to others and usually respond appropriately. They convey simple meanings to a range of listeners, speaking audibly, and begin to extend their ideas or accounts by providing some detail.” (National Curriculum 1999) This valuable approach to learning can give pupils the option to choose their own questions, this gives ownership of control over work and increases commitment to it. The National Curriculum only gives teachers “ a small amount of flexibility in the way they plan to teach literacy as the structure of literacy hour itself is tightly defined.” (Hayes 2004) Using an integrated approach to teaching and learning allows the teaching to be incorporated into a fun and different pedagogy and therefore allows the learning to become less structured, rigid and formal. Teaching Design Technology can be seen to require a cross-curricular and team approach and ultimately a whole school approach. “ It has added implications for resourcing, for timetable changes and for different teaching and learning styles and strategies.” (Sebba 2007)

An activity using the collaborative learning theory, may include going on a treasure hunt and generally being outdoors and undertaking something different and new, which increases enjoyment and variety, thus having potential to enhance teacher-pupil relationships. “ Child centred teaching approaches, based on interpretations of Piaget’s work, were adopted with commitment by teachers in the late 1960’s and 70’s. Great imagination and care were put into providing varied and stimulating classroom environments

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from which children could derive challenging experiences.”( Pollard 2008)

This relates also to the Researching Effective Pedagogy in the Early Years (REPEY 2002) One of the key findings of this report concerns the development of thinking skills: it has been found that good outcomes for children were found to be linked to adult-child interactions that included ‘ sustained shared thinking’ and open-ended questioning to extend children’s thinking. Including adult ‘ modelling’ is often combined with sustained periods of shared thinking. Developing children’s own ideas and investigation activities often provided the best opportunities for adults to extend children’s thinking.

In support of this in the research for The Effective Provision of Pre-School Education Project (EPPE project) ‘ sustained shared thinking’ is identified as one of the key features of high-quality provision, and is described as: ‘ Where two or more individuals “ work together” in an intellectual way to solve a problem, clarify a concept, evaluate an activity or extend a narrative. Both parties must contribute to the thinking and it must develop and extend their understanding.’ (EPPE project 2003) The research found that the most effective settings encourage ‘ sustained shared thinking’, which was most likely to occur when children were interacting one on one with an adult or with a single peer partner.

Excellence and Enjoyment which can be developed through varying ways of learning, is a key factor within cross curricular and outdoor learning. Within these factors is the enquiry cycle however, it is vital that the enquiry is structured. This means that children at all levels of development can work in mixed groups to achieve their full potential. The Excellence and Enjoyment <https://assignbuster.com/howard-gardners-theory-of-human-intelligence-education-essay/>

Document from the Department of Children Schools and Families (DSCF) claims that “ education is a critical stage in children’s development – it shapes them for life. As well as giving them the essential tools for learning, primary education is about children experiencing the joy discovery, solving problems, being creative in writing, art, music, developing their self-confidence as learners and maturing socially and emotionally”.(DCSF 2003)

Outdoor experiences reinforce learning in the classroom by providing an environment to test out ideas and hypotheses and allowing pupils to extend their understanding of the real world. “ The social, economic, physical, cultural and mental environment in which we live seems to have a powerful effect on how we develop intellectually and physically” (Barnes 2007)

Education is more than the acquisition of knowledge it is improving young people’s understanding, skills, values and personal development which in turn can significantly enhance learning and achievement. Learning outdoors provides a framework for learning that uses surroundings and communities outside the classroom. This enables the pupils to develop communication skills and self confidence and allows them to construct their own learning and live successfully in the world that surrounds them.

The Outward Bound Document (2012) hypothesised that outdoor experiences improve academic achievement as pupils are free to learn openly and outdoor learning can introduce children to a widening range of environments. “ The fact of the environment so clearly affects the brain development of other mammals might lead us to examine closely the relationship between the environments our children work in and their mental, physical and spiritual development”(Barnes 2007). Overall learning <https://assignbuster.com/howard-gardners-theory-of-human-intelligence-education-essay/>

outdoors provides challenges and the opportunity to take acceptable levels of risk. “ Giving young people responsibility for achieving these outcomes helps them to learn from their successes and failures.” (Outdoors Manifesto 2006)

The National Advisory Committee on Creative and Cultural Education (NACCCE) report inferred that creativity in education and learning should include, ‘ imaginative activity fashioned so as to produce outcomes that are both original and of value’ (Craft, A.; Cremin, T.; Burnard, P. and Chappell, K. 2007). The report includes that creativity should be more incorporated in the national curriculum, however creativity is not just related to the creative arts, music, art and dance it is about different ways of thinking. Creativity is about exploring different ways of doing things, such as asking ‘ what if..?’ questions and then looking for the answers. “ Being creative helps us to adapt and respond to a rapidly changing world. We don’t know the challenges that the children we work with will grow up to face, but we do know that for them to meet these challenges they will need to be creative and imaginative.” (Department for Education 2005)

Children gain knowledge and develop with different learning styles, visual, auditory and kinesthetic, the outdoors environment reinforces this. Barnes argued that there are other important factors influencing creative development “ the teacher’s personal qualities the ethos of the school and the particular pedagogical style all impact on the learning of the child.”

(Barnes 2007). Creativity is about allowing individuals to follow their interests so that they become lost in a task or an idea. In relation to our group project the children could be encouraged to ask questions, collect <https://assignbuster.com/howard-gardners-theory-of-human-intelligence-education-essay/>

materials to use within the class room and from this incorporating the findings into a scrapbook. Within the class room investigation this has a strong link with Design Technology and could include collages, paintings, designing, drama and other ways of developing their creative skills. The Excellence and Enjoyment Document supports this theory as “ Teachers found that when they actively planned for and responded to pupils’ creative ideas and actions, pupils became more curious to discover things for themselves, were open to new ideas and keen to explore those ideas with the teacher and others. Promoting creativity is a powerful way of engaging pupils with their learning.” (Department for Schools Children and Families 2003)

Ofsted released documents in both 2004 and 2011 which concluded that many educational establishments recognised the importance of outdoors learning. “ Experience of the outdoors and wilderness has the potential to confer a multitude of benefits on young people’s physical development, emotional and mental health and well being and societal development.” (OFSTED 2004 pg17) It is commonly known that children enjoy being outside and exploring new experiences, “...the outdoor environment can be more than a place to burn off steam, with more educators and architects and designers embracing the ideas that outdoor play space provides chances for the highest level of development and learning. When used best, it can be a place for investigation, exploration and social interaction.” (Child Care and Resource Unit, 2008). The Early Years Foundation Stage (2012) (EYFS) has also stated that young children need adults around them to value and enjoy the outdoors themselves in order to feel safe and secure, and this means

there is a need for higher staff to child ratio allowing all children to receive the same support. In support of this it has been stated by Dillon et al (2006) that the fear and concern about health and safety is a main issue about using outdoor provisions freely and meeting school curriculum requirements and the time used meeting these targets. Dillon also stated that the amount of time used for outdoor learning were affected by the shortages of time, resources and support and the wider changes within and beyond the education sector, affecting teachers and pupils experiences of outdoor learning.

Moyles discusses the issues of how teachers view outdoor learning; the article researched into outdoor learning and it was suggested that “ Integrating indoor and outdoor teaching and learning experiences is less well developed. Outdoor experiences are somewhat problematic for some settings which have only very restricted or no outdoor facilities. The most effective practitioners are able to develop creative ways of ensuring field trips to local parks and playgrounds” (Moyles et al 2002 pg140) Ideally both environments should be available simultaneously to the children through a seamless transition space and the children should be able to choose between indoor and outdoor spaces in free flow provision, which in turn allows children to make their own decisions building self development skills. This practise can also be used in relation to the curriculum and particularly Design Technology, as the variety of materials that can be collected and use differ greatly when looking at indoor and outdoor resources. The use of interactive communication technology can support all subjects, however with Design Technology and the outdoors it can be part of the planned approach



to outdoor learning and can add value to the outcomes for children and young people. Experiences recorded digitally, for example, can be taken back into the classroom and used to reinforce and further expand on the experience itself. The EYFS states ' Outdoor learning complements indoor learning and is equally important. Play and learning that flow seamlessly between indoors and outdoors enable children to make the most of the resources and materials available to them and develop their ideas without unnecessary interruption.' (EYFS Effective Practice: Outdoor Learning 2007)

The outdoor environment usually offers more freedom and space to move, allowing development of gross motor skills. This is vital for young children to develop their coordination, build muscle mass and experiment with moving their bodies. Research has shown that encouraging children to play outside may be a key way of increasing their levels of physical activity (Burdette, et. al., 2005). Gross motor skills can be developed better in the outdoors where there is space for children to move around as discussed by Parsons in his article, ' Young Children and Nature: Outdoor Play and Development, Experiences Fostering Environmental Consciousness, And the Implications on Playground Design' (2011).

## **Conclusion**

Overall from the literature I have read and discussed in relation to the outdoors, integrated learning and Design Technology, it can be seen that both cross curricular and outdoor learning have positive and negative aspects in children's education, including safety precautions and child development. The outdoors can be seen to offer a perfect companion to provision indoors, used in addition to the outdoor environment as it

enhances and extends what we are able to give children inside on the contrary it can be argued many settings do not get the opportunities to use the outdoors space appropriately (OFSTED 2004). Conversely I believe that even without adequate outdoor provision children can be taken outside the setting on walks and trips supported by EYFS (2012) “ Providers must provide access to an outdoor play area or, if that is not possible, ensure that outdoor activities are planned and taken on a daily basis.”(DFES 2012)

In summary children require a range of teaching techniques to ensure that they develop correct ways of thinking through problems and generally prepare them for the rest of their educational life. As can be seen the use of cross-curricular teaching and outdoor learning is a very useful way of promoting learning. By incorporating a topic which motivates and inspires the children (habitats and materials) into the children’s learning it allows them to make mental cognitive links and allows the children to develop problem solving, and also to develop the ability to make links between curricular subjects such as history, science, art, design and technology, literacy and geography. Promoting creativity in learning provides a new dimension to the curriculum by exciting the children about a subject, which then goes on to develop strong links with the child and the possibilities of learning. Overall the links between cross-curricular activities, linked with local area studies and finally incorporating creative learning, all go to aid in improving the development of key techniques which a child needs for later life. In thinking about outdoor provision, the central idea that we must hold in our minds is that the outdoors is different to indoors, these differences are what make it special and important. As a professional I need to be clear

about how the outdoors differs from the indoors, why children benefit from being outside and how the outdoors affects the ways in which young children learn. This thinking then gives us the key for what to provide and how to plan for the outdoor provision. The special nature of the outdoors fits the ways young children want to be, behave, learn and develop in so many ways.

From creating both research and the resource file as a group, I have developed an in-depth understanding of teamwork and the importance of working collaboratively drawing on my own skills and those of others. I have a firm understanding that I need a breadth of subject knowledge to make coherent links between subjects.

In reflection from the Outdoor Learning Day and the resource file I have recognised as a practitioner the importance of getting to know the strengths of the team I would be working with and therefore being able to discuss and support each other. As I learnt from the Outdoor Learning Day an issue that was challenging was that of having a whole school doing a similar activity with a wide age range and ability levels.

In conclusion to this assignment I believe that integrated learning in the early primary curriculum both indoor and outdoor environments should complement each other. As a teacher I should make valid links between topics and use a wide variety of teaching techniques to enable children to meet all children's needs helping them to develop and make progress at their own individual level.

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