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A case study of movement and physical development affordances of outdoor play

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Abstract

This case study of an 18th month old examines the movement and physical development affordances of outdoor play.The rationale is to promote the quality provision of outdoor experiences within ECCE settings. Current research highlights the importance of quality outdoor experiences for young children's health, well being, and development. Recognizing the multi-faceted affordances (Kytta 2004) of outdoor experiences is vitally important. Short video clips identifying particular areas of physical development are presented and analysed. A photographic overview highlighting the affordances of the outdoor environment in supporting the child's development is also presented. Data collection followed the natural rhythms of their family life as unobtrusively as possible and all data was shared and discussed. This guarded against any harm or risk to the research participants. Through the telling of stories of competence and learning " a learning identity" (Carr & Lee 2012) is constructed. We gain insight into holistic outdoor affordances from the child's perspective. A paradigm shift is required across to value outdoor space as a,child's right(UN Convention),motivator of movement (White,2014),playspace for the soul (Keeler,2008), childhood domain (Moore, 1986) and ecological wonderland (Carson, 1998).

Keywords: movement, physical development, outdoors, affordances, case study.

Part A: Case Study

A case study of movement and physical development affordances of outdoor play

“Movement is an integral part of life from the moment of conception until death, and a child’s experience of movement will play a pivotal part in shaping his personality, his feelings, and his achievements. (Goddard Blythe, 2005, p5)

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1. Introduction

“When you observe closely you can see that children are immersed in fuller aesthetic experiences in which their bodies, mind, and emotion are all engaged… their brain pathways are making the connections that will be the foundation for a lifetime of learning and pleasure.” (Curtis & Carter, 2013, p75).

Observing movement skills is the focus of this study. Isabelle's developing physical literacy is observed and analysed from the age of 18 to 30 months. Digital video, phenomenological observations, photos and narratives taken during outdoor play episodes give insight into her physical development and play. We see how her relationships, environments, experiences, and tasks shape her development.

Supported by her parents and extended family, Isabelle is a living embodiment of Bronfennbrenner’s (1979) bio ecological systems theory in action. As the family go about their daily lives interacting within the micro, meso, exo and macro systems of their society we see how Isabelle is afforded movement-rich opportunities. She embraces these opportunities with a growing determination, resilience and enthusiasm. A contagious enthusiasm transmitted to this observer, as I discover the privilege of opportunity in observing Isabelle. A privilege which has improved my understanding of physical development but holistically has given me the joy and appreciation of experiencing first-hand the wonder and sacredness of an unfolding childhood.

Mc Niff (2013) suggests in undertaking first order action research the researcher must ask themselves “how do I improve what I am doing?” In undertaking this study I hope to

improve my capacity to support pedagogues raise the quality of their outdoor practice and provision. This study will be a valuable resource for me in my role as trainer and mentor with ECI (Early Childhood Ireland).

In considering the complexities of observation (Delpit, 2006 in Curtis & Carter, 2013) states “We do not really see through our eyes or hear through our ears, but through our beliefs...” reminding us to know and understand ourselves before we dare to assume we can understand others. Being objective and suspending subjectivity is a very difficult skill to master, indeed some believe it is not fully possible. Whose reality is reality when our perceptions can be so individual and each of us construct our own understandings? Child development observations are a case in point.

“There are however many different theoretical perspectives in child development, many different ways of “seeing” the world and consequently many different explanations and solutions for any one given situation” (Greig & Taylor, 1999, p17).

Child observations, however, are central to our work. A sample of the most familiar types of observations used in pedagogical practice are identified (Appendix A). Notwithstanding the continuing relevance of these types of observations the early years community are embracing more holistic, inclusive ways of observing, assessing and researching young children (Whalley *et al*., 2013; Curtis and Carter, 2013; Sands *et al*., 2012, Carr & Lee, 2012) moving to narrative discourses, learning stories with multi perspectives. They consider knowledge can also be something that we do rather something that we possess. Gilbert (2005, p77) describes it as “Knowing is a process whereas knowledge is a thing.” Pedagogues need to really know the child rather than just have knowledge of him. Applying that principle to this case study the data collection and assessment was a shared journey of discovery. Through the telling and retelling of

stories of competence and learning we construct for Isabelle what Carr & Lee (2012) describe as a “learning identity”, Each of the parties adding their own knowledge and knowing perspectives to the narrative. In the field of early childhood care and education this is not only good practice but a fundamental human right of the child to be recognised as the unique individual they are.

Deconstructing the principles, aims and goals of Aistear, The Early Childhood Curriculum Framework (2009) it is clear that the fundamental responsibility of the early years pedagogue is to support the child’s developing personality, dispositions, skills, and learning through relationships and play. Constructing learner identities through sharing narratives with the children themselves and their families is gaining ground within the sector and an approach that I am committed to promoting throughout this study and among the services I mentor.

2. Methodology

Aistear (2009) and Siolta (2006) both recognise the centrality of partnership with parents in relation to early years care and education. This study was being carried out in the spirit of collaboration and inclusiveness. As the primary educators of their daughter, Isabelle’s parents have an ethical right to be valued as research partners in this piece of action research. Lynch (2000) subscribes to research coalitions where power is shared and where equality and inclusion are the underpinning ideologies. Gorman (2007) identifies four principles of autonomy, beneficence, non-maleficence, and justice as the basis of bioethics that apply to all research. In this research these principles were lived,

the parents and I being collaborative researchers sharing in this inclusive learning journey. Data collection followed the natural rhythms of their family life as unobtrusively as possible and all data was shared and discussed. This guarded against any harm or risk to the research participants. When appropriate we shared the video and photographs with Isabelle affording her the opportunity to enjoy and comment on her actions. The child's rights, needs and comfort at all times took precedence over any data collection.

As Isabelle is my granddaughter I could observe her without causing her any distress. I am tuned into her ways of being and picked up her signals as to her willingness to be observed. Data collection consisted of video observations, photographs, and notes taken regularly by both myself and the parents.

Short video clips identifying particular areas of physical development are presented and analysed. A photographic overview highlighting the affordances of the outdoor environment in supporting Isabelle's development is also presented. Kytta (2004) building on Gibson's (1979) theory of affordances proposes environment affordances are what the environment uniquely offers to each individual. The concept of affordance is valuable for describing environments from a behavioural perspective (Cosco, 2006; Heft, 1998).

3. Background Context

I have become tuned into the marvels of the developing vestibular and proprioception systems of Isabelle, noticing the smallest yet amazing movements that I had been oblivious to heretofore. "Isn't it astonishing how something you may never have heard of before has such a profound and pervasive influence? As the background for all the other senses the vestibular system gives us a sense of where we stand in the world."

(Kranowitz, 2005, p115).

I am concerned and exercised at the general low level of movement opportunities within many early years centres that I visit as an early years mentor. The very activities and experiences that support the development of these two vital inner senses are too often being denied to children across an increasingly sedentary, outcomes based, early years sector which is fearful of litigation. Quality elements of outdoor provision including running, climbing, and rough and tumble (White, 2014; Stevens, 2013; Lester and Maudsley, 2006) are at best sporadically provided and at worst prohibited. Research in Irish settings found that the outdoors is increasingly marginalised in young children's every experiences (Kernan & Devine, 2010). The reduction in provision of stimulating, challenging, risky play in the early years on the grounds of health and safety concerns is a shared phenomenon among many western risk averse societies. Gill (2007) and Sandseter (2009) have written extensively on risk aversion and risk benefit, highlighting the negative implications for children who experience over protection in risk averse environments. There are, however, a few promising signs of change. White (2014) claims that "the risk of no risk" is becoming more widely recognised and debated, particularly within the early years sector. Ball *et al*. (2012) agree "there are signs that the public policy climate may be changing for the better".

In Ireland in 2013 the government released some small capital funding grants to preschool services to upgrade their outdoor provision to provide risk-rich natural environments. This was a major breakthrough but work remains to be done to support providers and the inspectorate be confident and competent in their knowledge and understanding of such an environment.

Physical development is a dedicated prime area in the Statutory Framework for Early

Years Foundation Stage (2012). Children's activity levels are a growing cause of concern and are key components of many national health initiatives e.g. British Heart Foundation's Early Movers Programme. Physical development and wellbeing is central throughout the aims and goals of Aistear (2009). The quality and amount of physical activity in early years settings, however, still leaves a lot to be desired. Research is consistently finding low levels of physical activity and high levels of sedentary behaviour (Reilly, 2010; O'Dwyer *et al*., 2012). This is also true of research carried out in families (O'Dwyer *et al*., 2012). The Growing Up in Ireland study reports "…an absence of physical activities or games at home were associated with delays in reaching the three year gross motor milestones…a quarter of all three year old children were overweight or obese" (DCYA, 2013). The Wild Child Poll (2010) reported that 40% of parents surveyed had never climbed a tree with their child and 1 in 3 had never built a camp/den or made a daisy chain. Recent Finnish research shows that the interplay between physical activity and involvement is the strongest in outdoor activity (Reunamo *et al*., 2013).
The World Health Organisation (2012) have identified childhood obesity as a serious global challenge. In Ireland and the UK concern has been growing at the rising obesity levels among young children (Start Active, Stay Active, 2011; GUI 2013). Start Active, Stay Active (2011) reports Sandercocks' research on the physical activity of 8550 children. He believes that the "obesity obsession" overshadows more serious problems related to lack of physical activity and movement. His research identified that across all ages low fitness was more prevalent than obesity. Burdette & Whitaker (2005) believe in the hope of encouraging more parents to maximise their children's play opportunities more emphasis should be placed on the "3 As": attention, affiliation, and affect, in other words the cognitive, social and emotional rather than on "2F's", fitness and fatness.

While much media focus and current public policy is targeting this worrying obesity trend it could be argued that the wider implications of sedentary lifestyles, and movement depravation on young children's holistic development is less recognised among the early years sector and indeed within society at large. Vestibular and Proprioception development is a case in point. Within the early childhood sector workforce there is cause for concern. My own action research has shown there is very little awareness of vestibular and proprioception development among practitioners (see Assignment 2 Action Research). Should this trend be replicated across the sector and into the primary education sector as I fear it is, I propose it may in part explain why sedentary behaviour is so prevalent within our educational systems (Dept. of Health, 2009; Biddle, 2010; Hinkley *et al*., 2010).

Goddard Blythe (2004), Kranowitz (2005) and Hannaford (2005) all extol the virtues and necessity of movement opportunities in the early years. They each describe in their own way how learning is not all in the head, and how the body needs movement to build and feed the brain. An ever growing number of research papers (Waller *et al*., 2010; Waite, 2010; Gray, 2010), manifestos, and publications (Save Childhood Movement, 2013, Vision & Values Partnership, 2004), outdoor play advocates (Fjortoft, 2001; White, 2014; Stevens, 2013; Sandseter, 2007; Greenfield, 2011) pose vigorous arguments for the importance of outdoor play experiences for young children's development, health, and wellbeing.

Each individual’s musculoskeletal and neural systems are uniquely wired up based on their individual experiences and environments. Hierarchical reflex theories suggested that development of our postural control relied mainly on reflexes and our nervous

system. In more recent years system theories purport that this is only part of the story. Shumway-Cook & Woollacott (2007) explain how the continuous complex interaction of individual, task, and environment determines how that individual experiences and operates in the world.

The vestibular system provides the brain with information on head position and its movement in relation to gravity. “Being connected to the earth is a primal need for survival. The vestibular system tells us where we are in the relation to the ground” (Kranowitz, 2005). The sensations experienced through our 5 external senses combine with our inner somatosensory system and are sent to the brain via the central nervous system. The brain then processes the information from all of these sources simultaneously, and within a nanosecond sends instructions to the motor neurons to enable the body react. The body reacts with movement which sends more sensations to the brain, thus starting the cycle again. This is a simplified explanation of a very complex sequence known as sensory processing. “Movement therefore is both the primary motivator and medium through which learning and brain development takes place” (Stevens, 2013).

My professional experiences lead me to believe that the lack of understanding of the role of physical development and its prime importance in building the brain is widespread among early years practitioners. Including such content on training and professional development programmes could in my opinion support improvement in provision. As a result I am devising a programmes on the topic that will be delivered on ECI training programmes throughout Ireland. Having previously undertaken a study of Isabelle tracking the outdoor affordances she experienced in her first year, I was interested in following up the study in her second year to track her physical

development and the outdoor affordances that supported it. This study will provide resources for the proposed programme as Isabelle's family have generously given permission for the material to be used in training.

4. Case Study

This case study presents Isabelle's physical development through a series of observations in the outdoors (Appendix B). Each analysis will focus on a different aspect of physical development

Video Clip	Isabelle Digging	34 s
Video Clip	Climbing the Barrier	33 s
Video Clip	The Throwing Game	2 mins 34 s
Slideshow	Hands /Affordances	4 mins 20s

Isabelle is the first born child of Dave and Jenny. She lives in a suburban area in the city which has easy access to parks, woodland, mountains, and beaches. Her parents share a love of the outdoors and Isabelle has regular interaction with each of these natural environments. Since birth she has been afforded lots of movement opportunities outdoors.

We begin with Isabelle at 18 months of age. Her postural control has already developed to the point where she has head and motor control that enables her to walk unaided and to manage fine motor skills appropriate to her age.

Her vestibular – visual – proprioceptive connections continue to refine and this is resulting in more mature balance (Parham & Mailloux, 2005).

4.1. Observation 1 Isabelle Digging Age: 18 months

Isabelle is balancing on her hunkers in a squatting position shovelling soil onto a small spade, lifting it up to head height and pouring it into a bucket. Her postural orientation is enabling her complete the task as she maintains an appropriate relationship between her body and the bucket. This position has relatively high stability requirements as her only base of support is her feet on the sloping ground. She repeats the action 6 times. When we replay and pause the video we can see her physical prowess in detail.

0.00s

As she squats on her hunkers maintaining a stable balance, she displays postural control. Her left arm is slightly extended and her hand is closed in a fist. She is using her slightly extended left arm and closed fist as a counterbalance and it is providing her with greater stability and balance as she shovels with her right hand and arm. Her vestibular system is working well, keeping her balanced as she repeatedly turns her head to execute the task. Adaptive messages are being sent to her muscles and joints enabling her to maintain balance as her centre of gravity changes. Her proximodistal development is evident as we see how she controls her trunk, her arms, and wrist. The immaturity is also visible as the movements are less fluid than that of an older child. The sensations she is experiencing are automatically being processed at spinal cord and brain stem level through her somatosensory system updating her brain on her body position and movement.

02s – 04s

As we move we think; as we think we move. We can see this in action as Isabelle makes choices in her task. Developing an ever expanding bank of selective movements, which Shumway-Cook & Woollacott (2007) describe as “sensory motor – maps” she repeats and modifies her actions.

She demonstrates praxis, planning what to do and organising her body to carry out the required motor tasks. Commands are being sent from her cortex, brain stem and cerebellum to her lower motor neurons enabling her muscles and tendons to contract, stretch, and extend as required. She demonstrates her fine motor skills and hand-eye coordination as she digs the spade into the soil, lifts, twists, and pours the soil into the bucket. Her muscle tone and strength enables her to push the spade into the soil and lift it to head height. Her initial efforts are quite quick and jerky as befits her developmental stage. Her muscles, and tendons in her legs, abdomen, back, neck, shoulder, arm, wrist and hand are utilised in this task. She visually tracks each move. Young children rely on vision more than adults to maintain posture control (Goddard Blythe, 2005). With all of these types of experiences her righting and equilibrium reactions are replacing primitive reflexes.

06s - 17s

Isabelle repeats her actions visually tracking each move. Digging into the soil her balance is slightly disturbed, causing small amount of sway. At 8 secs she waves the spade, then presses it into the ground, using it as a support while she regains postural

control. This is similar to using fingertip support: "…sometimes just fingertip support can greatly affect stability" (Jeka & Lackner, 1994). This shows how her proprioception sense is used to good effect.

18s - End

As she continues we see a slight swaying. Keeping her back straight she uses her hips and extended left arm to maintain balance. When a stone rolls off the spade she uses the spade to pick it up again. This time she raises the spade, slowing and steadying her arm movements, watching the stone all the way ensuring it stays on the spade until she flips it into the bucket. At 18 months she is showing us how she learns from her experiences. She adjusted her physical actions to keep the stone on the spade. Slower, more precise motor movements require more control and skill to execute. Within 30 seconds we have seen adaptions in her control through design and repetition. The differing weight, feel and resistance she experiences with each spadeful is refining her proprioception sense and building her core neurological sensory systems. These new experiences add a new book of knowledge to her ever expanding library of mind. This simple enjoyable activity chosen by Isabelle reaffirms how the outdoor environment can be an optimum, ever-changing learning space for young children, and how natural materials are so engaging for them. "Natural materials have a very high play value and contribute to all areas of development…" (White, 2008, p15).

4.2. Observation 2 Climbing the Barrier Age: 22 months

In this observation we see Isabelle climbing a pile of metal barriers in her grandparents' garden, a risky activity which she seeks out each time she visits. She presents as being a ready, willing, and able explorer of her environment, demonstrating "a robust sense of self "(White, 2014). She is ready to climb, willing to take on the challenge, and, despite having to make a few attempts, able to succeed, showing resilience and determination. Her enjoyment and increasing control is evident as she jumps and runs on the flexing surface.

0.00s - 17s

Isabelle raises her arms and grabs the pole. Lifting her left foot onto the pole she then switches to her right, slides back down and tries again. As she receives feedback through her muscles, joints, and tendons she adapts her orientation. To assess this she must feel and understand her body messages that she was off balance, in the wrong position to proceed. Here again her sensory motor map is utilised. Shumway-Cook & Woollacott (2007) describe it as the pathway from sensation to movement going via her "body schema" as she figures out how she can successfully complete the task.

18s - end

Attempting again she leans into the barrier for support. Using her hands, elbow, knee, and toes for leverage she pulls herself up. Demonstrating praxis she plans her next move to get to the top. Muscle tone and strength are necessary to lift herself up. The more she practices these type of activities the stronger she will become. Standing momentarily to regain balance she jumps onto the top of the barrier. This is a different

sensation as the grid is noisy and bouncy under her feet, the ultimate thrill and reason for her efforts in climbing it. Sight, sound, and the sensation through her feet combine to make it pleasurable. Taking a moment to register the sensation, she also looks down at her feet adding a visual reference for the sensation as her vestibular system is still dependent on her vision.

Isabelle has been on the barriers before with adult support and supervision. Now she has managed it herself. She has had a lot of practice climbing on bars in her local park and these experiences have benefitted her. She uses previous knowledge gained to master new situations. Her “personal response repertoire” (White, 2014) is expanding with each new experience. Each time she is more adventurous than the last as she gains in competence and confidence. “Children learn early in life about their own capacities and quickly adapt their growing bodies and skills to new opportunities” (Cosco, 2006). It is understandable that children seek out such experiences as they derive so much from them, and worrying that so many adults have forgotten the need for them to do so.

4.3 Observation 3 The Throwing Game 28 months

This observation reminds us of the potential of children to find play opportunities in the most unlikely circumstances and with the most unusual loose parts. Isabelle’s Grandad was sweeping up debris from a trench with a dustpan when Isabelle playfully threw a net float into the trench. He threw it back out and a game ensued.

The more practice and experiences Isabelle has with motor activities the greater her postural control becomes. According to Reilly *et al*. (2008), as the attentional demands

for posture decrease it allows more concentration for cognitive processing.

Yack (2002) explains how sensory integration occurs through sensory registration, orientation, Interpretation, organisation of the response and execution of the response. Kranowitz (2005, p56) identifies components of sensory processing as: Reception and Detection, Integration, Modulation, Discrimination, Postural Responses, and Praxis. These processes are simultaneous, happening in nanoseconds. We see each of these in action as Isabelle initiates a game of throwing with her Grandad. Now 28 months old, we see how her motor development has progressed. She is more capable and confident in her movements, stepping, bending, picking up, and pushing up from her hunkers to a well-balanced standing position. She confidently throws the float, maintaining balance and postural control as she extends and stretches her arm, hand and fingers.

24s

we see her enjoyment of the activity as she whoops and celebrates her achievement. She is building self-confidence and a capable self-image.

28s - 41s

We hear Isabelle comment on the “Crows looking”, giving us insight into her discriminatory capability. She can distinguish between sounds and indeed some bird types. At 41s we see her combine her sight and sound senses as she adjusts her head position and looks in the direction of the sound to locate the crows, saying ”The crows in the tree…”. These increasingly selected movements are building a foundation for future learning. Goddard Blythe (2005, p79) identifies the importance of matching sight and sound for later reading and writing. This activity affords Isabelle lots of opportunity to

match sight and sound, e.g. crows in the tree, noise of the float hitting the dustpan and ground.

1min 16s

We see Isabelle with a new idea as she explores a different way to drop the float into the trench. Ideation is developing; this is made possible by her cognitive development. As she now has the ability to use symbols she can think in more complex ways. She squats down and pushes her legs backward into a lying position deliberately adjusting the trajectory and power of the throw so the float drops in front of her.

1min 42s

Isabelle displays increased postural control as she bends backwards in a standing position, stretching her abdomen and back muscles. Although she displays a level of sway as she bends backwards she maintains control.

2min 4s

She shows the exercise this game provides for her as she uses two hands to throw the float outwards from her chest. The extension on her arms and fingers and the distance she throws the float demonstrates the increasing force she can put behind the throw.

This activity reminds us of the role of the adult and how a positive disposition towards play can enhance the lives of both adult and children and provide simple moments where memories are made and relationships are built.

Ayres (1979), the pioneering occupational therapist who introduced the concept of sensory integration, believed that sensory integration is integral to the process of healthy development. Sensory integration is seen as one component of sensory processing. Bundy *et al*. (2002) describes sensory integration as a circular process of intake, integration, planning, adaptive interaction learning and feedback. As Isabelle plays the throwing game with her Grandad, we can see her sensory process and integration at work. She makes a series of adaptive responses consistent with her developing praxis, taking in the sensory information around her, and adding her own ideation. Burdette & Whittaker's (2005) 3As are clearly present in this clip. Isabelle's attention (cognition) of the sequence, action and indeed possibilities of the game is visible. Her social experience (affiliation) with her Grandad and the obvious enjoyment (affect) she experiences are manifested in her actions, body language and speech. Ironically the 2Fs (fitness and fatness) are also being positively addressed with the physical exercise she is undertaking.

5. Discussion

Sandseter (2010) has identified six characteristics of risky play as Great Heights, High Speed, Dangerous Tools, Dangerous Elements, Rough and Tumble and Disappear/Get Lost. Writing on the evolutionary perspective of risky play she concurs that some of the benefits of this type of play may have been to practice and enhance motor/physical skills for developing muscle strength, endurance, and skeletal quality.

"When children engage in risky play, they continually make risk taking decisions about taking or not taking a risk and how to handle this risk" (Sandseter, 2010, p17). Isabelle regularly decides to climb the barriers and a range of other structures (see slideshow).

She has been afforded a freedom (appropriate to her age) to make these decisions and develop competence and confidence in her abilities notwithstanding that either parent observe from a close distance ready to intervene if necessary. I have observed Isabelle on many occasions being cognisant of this fact. She attempts to climb structures much more frequently when she is with her parents than when she perceives that she is unsupervised, although she rejects any hand-holding when she feels she can do it by herself. The security she feels in her parents' presence affords her the confidence to take relative risks. This may also be due to her reflective disposition. Her disposition to observe before she acts particularly in new situations or environments has also been confirmed by her parents. It also makes it a bit easier for them to trust her judgement as she seldom, if ever, rushes into something she is unsure of. While Isabelle's parents have only their daughter's safety and wellbeing to consider, the situation becomes more complex within day care. Providing for risky play as a pedagogue requires a positive attitude, knowledge and skills. Managing risky play demands a skilled workforce, clarifying policy and procedures and a clear understanding of risks and benefits. Most important, however, is the need for the adult to know the skill set of each child so they can assess the level of risk particular activities may present for that child. "Providers need to decide for themselves what level of risk is appropriate in their provision, because the type and style of provision must be responsive to local circumstances" (Ball *et al.*, 2012, p13).

Wilson (1999) documented how through evolution the human hand changed in structure due to its need to grasp, throw, and manipulate objects like stones and sticks. He describes how this then led to changes in the structure of the brains nervous systems

and the development of more complex patterns of thinking. This concurs with Goddard Blythe's (2005) assertion that the brain may control the body but the body has much to teach the brain. Sobel (2008) and Goddard Blythe (2005) express concern at the narrowing repertoire of some young children's hand movements as they spend increasing amount of time tapping on screens. Sigman (2007) concurs that the amount of screen time spent by children watching the increasing variety of screens is linked with significant measurable biological changes in their bodies and brains. As can be seen from the 'Hands' slideshow (Appendix B) which I have developed as a resource, the outdoors in contrast has provided Isabelle with an impressive range of materials and objects to explore and manipulate. As her fine motor skills and somatosensory sense develop she learns a lot about her world through her hands.

6. Conclusion

Not for the first time or hopefully the last have I had the privilege and life affirming pleasure of watching the wonder and awe of an unfolding childhood. A bittersweet realisation as I am all too aware the realities of so many children's lives are far from what they should be.

The most memorable and heart-warming moments of this study relived in the videos and slideshows yet again reinforce the belief that it's the little things that count. Underlying the unashamed sentimentality is a story of development, a miracle of nature, a life of movement. With a better understanding of the physical development necessary for each of those memorable moments to happen, I look differently at every squeal, frown, pick, splash, chase, smile, throw, and embrace. "It is the small moments that make the biggest difference" (Galinsky, 2010, p11). I look differently at the practices in

ECCE settings assessing the movement opportunities available. I have begun developing a training programme using the evidence rich resources collated during this study.

Isabelle is on her journey in what will be a lifelong collaborative process between body, brain, and spirit, fuelled, nourished, and no doubt challenged by the human relationships she forges.

Her second year of life has seen a growing family circle and a widening of her world. As new faces, places, and spaces filled her days she embraced them with a mix of excitement, enthusiasm, and sometimes trepidation. We see her grow and develop with an enthusiasm for life, a determined nature, and a “growth mindset” (Dweck, 2012). Isabelle’s love of the outdoors and growing naturalist intelligence (Gardner, 1993) are evident. Nature and the outdoors has brought a richness of experience to her young life. The photographic, video, and narrative evidence attests to this, a small percentage of which has been used in this work. As research partners, Isabelle, her parents and I continue to learn from each other. We have captured a staggering amount of experiences, emotions, and memories woven together with love, nurturing and affordance. I complete this case study wiser than before, more convinced and committed to the importance of movement, of childhood, of family, of now. This sentiment is more eloquently put by Stoppard (2002): “Because children grow up, we think a child’s purpose is to grow up. But a child’s purpose is to be a child. Nature doesn't disdain what lives only for a day. It pours the whole of itself into the each moment. We don’t value the lily less for not being made of flint and built to last. Life’s bounty is in its flow, later is too late…”

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APPENDICES

APPENDIX A

Child Observation Methods

The following methods are commonly used within the ECCE sector.

Method	Description	Advantages	Disadvantages
Narrative/ Running Record	Tells the story of what child is doing. The observer records all they see and hear.	A good method to start with. Non-selective. It can give a comprehensive and detailed record and allows assessment of all round development. The observation is likely to demonstrate spontaneous behaviour.	It can be difficult to record everything. It can give an atypical image of the child as information can be taken out of context or misinterpreted.
Target Child	Method was produced in 1970 by Oxford Pre-School Research Project. It is a pre coded observation giving a brief picture of a child's behaviour over 10 mins.	Enables observer record and analyse lengthy and complicated observations quickly and systematically. Once code is learnt it is easier to write. Language, task and social groupings can be spotted immediately.	Codes have to be learnt prior to recording. Easy to miss important details.
Checklist	A list of developmental skills, traits, or behaviours which are ticked off as observed.	Checklists are useful for recording skills or attributes. They can be used as norms of reference against which a child's developmental progress can be measured. Easy technique to learn. Can identify strengths and weaknesses.	Information given is very limited. You can only record what you are looking for not what you may see. Checklist has to be planned in advance.
Time Sample	Observations take place at fixed intervals over a period of time as decided in advance e.g. 2 mins observation every fifteen minutes for 2 hours.	Can be used to get a good overview of child's development, or to observe use of equipment, or particular activities, or social group or language interactions at fixed periods. Patterns of behaviour can become apparent.	Important behaviours may be missed out on if they occur outside the observation time settings. Observer may miss taking observation at given time.

Event Sample	Event to be observed is decided in advance, i.e. Frequency of particular behaviours and the conditions under which they occur. Records events as they happen.	It isolates the behaviour which has become problematic and can help interpret child's behaviour. It can show up patterns or causes of behaviour and may be helpful in developing strategies to support child.	Observation takes no account of external factors which may be influencing child. Child can become aware that his behaviour is becoming a focus of attention.
Digital Video Recording	Video recordings of children's and adults spontaneous behaviour.	Video can be a rich source of information with action, speech, group dynamics captured. It can be revisited again and again allowing you see things you may have missed, Any of the above recordings can be written from a video clip. This medium also affords a range of assessment focusses from the same video piece, e.g. individual, pair interactions, group interactions. It can also be effective to share with parents or used in staff training. Social media has transformed people's perceptions of using technology.	Extra consideration in relation to confidentiality as it is may not possible to protect the identity of the observed. Permission must be received for all adults and children who may appear on the video. Equipment can be intrusive if not used properly. Clear policies and practises are needed to ensure appropriate storage of the video in this social media age.

APPENDIX B

Observation 1	Isabelle Digging Video clip 34 secs	On CD
Observation 2	Climbing the Barrier Video Clip 33 secs	On CD
Observation 3	The Throwing Game Video Clip 2 mins 34 secs	On CD
Slideshow	Hands/Affordances	On CD

PART B: MOVING OUTDOORS

An Action Research Project:

What strategies can I employ to raise awareness of the affordances of movement and outdoor play for young children's physical development and wellbeing?

"The need of quiet, the need of air, the need of exercise: the sight of sky and of things growing seem human needs common to all"

Octavia Hill, co-founder of The National Trust

1. Introduction

I stood as a mentor in the small playroom of the full day care centre surrounded by 14 delightful 3 and 4 year olds. It was the hottest day of the year so far, and the sun and heat streamed through the double doors. Children lay on the floor with building blocks, others sat at the tables with jigsaws, while two boys chatted with me. Twelve toddlers napped upstairs in their dormer room on mats while four babies were in the adjoining room. The small “garden” was completely covered in blue rubber wet pour from concrete wall to concrete wall and an oversized climbing frame overpowered the limited space. The children were eagerly awaiting their “turn” to go outside, for this tiny space, approximately 10 x 10 meters was also shared by the babies and toddlers in the crèche. When they finally got outside they immediately overfilled the space, some sitting on plastic chairs they had huddled in a corner, others playing dress up in padded superhero suits that quickly had the sweat running down their brow. That was the only running happening today as the space certainly didn’t allow for anything like running, jumping, digging, or even peaceful lying on grass (if it existed). The adults were kind and caring but in crowd control mode, watchful in case of accidents. I experienced the lack of space both inside and outside as oppressive and I was only there for a short time.

The children occupied themselves around the equipment although rich and meaningful outdoor play experiences were a distant dream in this environment. They seemed content playing together for they had assimilated this provision as their norm. I stood there deeply distressed as I thought of the beautiful grassy parkland nearby and of the waves lapping onto the beach just two roads away from where I stood, yet they were as inac-

cessible to these children as a distant land. Lack of awareness, bad design, sector legislation, political policy, societal values and attitudes all conspired to concoct this reality, a scene simultaneously being replicated in many early years centers. Captive childhoods sprang to mind as I remembered with envy the natural Norwegian playspaces I had visited. What are we doing? What am I doing? I questioned as I left, disheartened and disillusioned. I hoped that over the coming months I could support them in making some improvements in provision. I knew in reality the problems were many and complex. A crusading army of advocates fight for quality improvements across all aspects of the early years sector and there are many early years educators that humble me with their caring, commitment and skill but on this day, for this moment, I felt as useless as a Band-Aid on a gaping wound.

(Extract from my reflective journal, 20/5/2014)

In my role as a Quality Mentor I have identified that many of the services I work with are in need of interventions and support in

1) recognizing the important role movement and outdoor play has in a young child's life,

2) improving the quality of their outdoor provision.

Quality outdoor provision that supports movement, exploration, and connection to the natural world is crucial on many levels. Cosco (2006) states "if the environment does not offer developmentally appropriate affordances the perception - action continuum is interrupted and the opportunity for learning about the environment and self is lost." The

quality provision of outdoor play and experiences has become a complex pedagogical and societal issue both nationally and internationally. “The loss of outdoor play spaces for many children is one aspect of the intricate interplay of legislative, social, urban design, technological and pedagogical factors that introduce a complex set of opportunities and losses” (Waller *et al*., 2010, p438). Children’s access to extensive high quality outdoor experiences is extremely variable and commonly low (White, 2011, p2). Copious research affirms and recognizes the affordances of outdoors as a learning environment (Waite, 2010; Maynard & Waters, 2007; Bilton, 2010). While this author agrees and welcomes the fact, heavily regulated and planned outdoor “playtime” within sterile settings is still a common occurrence within my experience. ‘Bringing the indoors outdoors’ is a phrase commonly used by pedagogues who neglect to see the special affordances of nature and outdoors. Humberstone & Stan (2009, in Waite, 2010) note in their study of wellbeing outdoors that issues of power and performativity common in the indoor classroom may leak outdoors.

Many childcare services I encounter are operating out of premises not designed as childcare settings, in office blocks, shops, family houses, community buildings, etc. Both indoor and especially outdoor spaces within these settings can be very problematic and unsuitable. Bereft of suitable outdoor space, many providers do trojan work to make the spaces fit for purpose. They may meet minimum basic standards (DOHC, 2006) but they pose significant problems for the children and adults who can inhabit these spaces for up to 8-9 hours a day. To date there has been a dearth of Irish research on outdoor environments. Kernan & Devine (2010) suggest outdoors is increasingly marginalised in young children’s every day experiences. Although the reasons for this situation are varied and complex this author increasingly finds it ethically and morally questionable that

we expect children to work, rest, and play indoors in space ratios of 2.3 sq. m per child, half the size of a car parking space, and then confine them outdoors as well. Outdoor space size has not yet been regulated - “children in part time or full day care services should have access to the outdoors on a daily basis, weather permitting” (DOHC, 2006). Sessional services who operate for 3 hours per day are a different category and by law are not required to have an outdoor space although it is recommended. On a positive note, however, outdoor provision is increasingly in the spotlight due, in part, to the health agenda, Aistear (2009) and Siolta (2006) frameworks, new study options and the increasing number of practitioners who are interested in moving practice outdoors. Much needs to be done to ensure adults who are involved in the design, construction, and provision of childcare centres, and in particular day full daycare centres where children are spending vast swaths of time in settings, recognize the multi-faceted affordances of outdoor experiences. A paradigm shift is required across the wider early years sector to see outdoor space as a child’s right (UN Convention), as a motivator of movement (White, 2014), as a playspace for the soul (Keeler, 2008), as an ecological wonderland (Carson, 1998), as a childhood domain (Moore, 1986), and as a challenging, stimulating, social environment (Siolta, 2006). How the space is used must then be considered. Academically based, outcome driven, curriculum implementation that keeps very young children indoors and sedentary for long periods of time need to be challenged. “Learning is driven by outcomes and targets rather than children’s powerful urge to learn” (Tovey, 2013). Save Childhood Movement 2014 advocate that all children should have rights and freedoms to environments that support them in developing their natural dispositions and capacities, including regular and open access to the natural

world. The growing mountain of research on outdoor provision from multiple perspectives and disciplines is necessary for change but substantial change at the coal face is taking longer than some childhoods last. My passion and commitment towards quality outdoor provision gave me my research question: What strategies can I employ to raise awareness of the affordances of movement and outdoor play for young children's physical development and wellbeing? Answering it, of course, would be a whole different matter.

2. Background Context

Three quarters of US preschool children are in childcare centres (Copeland *et al*., 2012), and many are not achieving recommended levels of physical activity. Problematic physical activity levels are increasingly being reported across the medical, social science, and educational research spheres (WHO, 2012; O'Dwyer, 2012; Reilly, 2010; White, 2014). There is no doubt that these multi-disciplinary calls for increased access to physical activity are gaining momentum and raising awareness across society. Arguably the understanding of the importance of movement in relation to the development of the core neurological sensory systems (Goddard Blythe, 2005; Hannaford, 2006; Kranowitz, 2005) is much less widely discussed. My own observations of services over 10 years concur with these findings. The sedentary nature of much of the curriculum implementation is worrying not only from a physical development perspective but also from a rights and wellbeing perspective. Copeland *et al*. (2012) found in her USA study that the three main barriers to physical activity were a focus on academics, injury and financial

concerns. The amount of time very young children spend in confining rooms engaging in one sedentary activity after another in the name of education is both distressing and developmentally inappropriate. Copeland *et al*. (2012) and Brown *et al*. (2009), report a worrying figure of 70–83% and 89% respectively of the American child care day being sedentary with only 2-3% of the day involved in vigorous activity. British research by O'Dwyer *et al*. (2012) found that preschool children who spent longer hours in childcare had less physical activity throughout the day than those who spent half days. They also found "a remarkable similarity between preschool children's activity levels and their older counterparts suggesting that blocks of inactivity are already apparent in the pre-school environment."

In a small pilot study conducted by the author in 2012 (Appendix A), 15 full day care providers tracked the amount of time their babies and toddlers were outdoors over a period of 10 days in November. It highlighted the fact that their youngest children, aged 6-18 months, were having little or no access to outdoors, not to mention being divorced from the daily life of the local community lived outside the fences and setting boundaries. In total, over the 10 days 3 of the children were not outdoors at all, 5 were outside between 1 and 2 hours, 3 between 2.30 and 5.30 hours, and 4 between 6 and 10.37 hours. This author strongly argues that children have a basic right and need for quality time and experiences outdoors.

Considering that children are spending a considerable portion of their early childhood in such settings for months, indeed years, on end it is imperative that cross-sector pressure continues to be exerted in highlighting the rights of children to appropriate movement

opportunities and outdoor access. Play is the motivating force that produces physical activity and social interactions with other children and adults (Pelligrini & Smith, 1998). The interplay between physical activity and involvement is the strongest in outdoor activity (Reunamo *et al*., 2013). Early years practitioners need to be supported to gain the knowledge, skills, and competencies to provide both an environment and curriculum that affords outdoor movement-rich opportunities through play. With this research project I aim to develop a programme that will have utility in this regard.

3. Literature Review

Recently addressing the Oireachtas (Ireland's equivalent to the Houses of Parliament) CEO of Early Childhood Ireland, T. Heeney advocated "the early childhood education sector is a pressure cooker of high expectations and low investment."

Clearly this problem isn't specific to Ireland, or indeed to early years care and education. A proliferation of organisations, citizens, naturalists, environmentalists and educators advocate for the rights of children to experience and benefit from quality environments both indoors and outdoors (Carson, 1998; Moore, 1986; Pound, 2011; Sandseter, 2007; White, 2011). "Both the indoor and outdoor environments, including the neighborhood, should be used as learning resources" (Ministry of Education, 1996, p83).

Outdoor play and learning advocates within the care and education sector tirelessly argue for recognition of the value and importance of quality outdoor environments for children's

holistic development (Greenman, 2005; Keeler, 2008; White, 2014). The worrying reports on children's physical health emanating from the medical profession (Dept. of Health, 2011; BHF, 2013) has brought added focus to policy makers, the media and the public at large. Pate (2004) found physical activity levels were highly variable among preschools which suggested that individual policies and practices were influential. Trost (2008) states that traditionally 3-5 year olds are viewed as highly active. However his and other studies (Pate, 2004; Jackson, 2003; O'Dwyer, 2012) suggest that many preschool children engage in relatively little moderate to vigorous -intensity physical activity. The ramifications of the increase in child obesity appear to weigh far more heavily on government policies than the ramifications of an education system that supports sedentary behaviour at an ever younger age. This is despite the requirements for movement in the early years for the development of the core neurological sensory systems (Ayres, 1972; Goddard Blythe, 2005) and for "wiring" the brain to learn (Hannaford, 2006). Sandercock researched the physical activity of 8550 children (Start Active, Stay Active, 2011). He believes the obesity obsession overshadows more serious problems related to lack of physical activity and movement. He identified that across all ages low fitness was more prevalent than obesity. In the mental health domain Gray (2011) proposes a causal role between the decline in play and the rise of psychopathology in young children. Extrapolating on Twenge (2004) and others research he links the functions of play and the declining opportunities to experience them to the corresponding decline in children's mental health. Disturbingly recent research has indicated "…by the age of 13 years, 1 in 3 young people in Ireland is likely to have experienced some type of mental disorder" (Cannon *et al*., 2013). While there is of course myriad reasons for this figure, it is now understood that children's experiences in the early years have lifelong implications. Therefore there is an onus on the

ECCE sector to continuously advocate for children's rights for quality play and environment provision. Bilton (2010) explains that in the early 1900's outdoors became known as a health promoting environment, not an educational one, an attitude we can see has remained even today. It is somewhat ironic that a century on we are still promoting outdoor play to tackle the children's health problems, only now the problems are reversed. Rather than health problems being caused by poor nutrition, sanitation and housing, they are caused by excess food, comfortable homes, and education systems that encourage sedentary lifestyles.

The natural environment has been central to human evolution. It has served us as a home, a playground and a classroom for all of our history. Wilson (1984) states we have an innate affinity with nature and the natural world, which he terms 'biophilia'. That affinity is being tested like never before as greater numbers of children are turning to and tuning into technology and disconnecting from the outdoors (Louv, 2005). Sobel (2008), Goddard Blythe (2005) and Wilson (1999) express concern at the narrowing repertoire of some children's hand movements. Sigman (2009), Pfeiffer *et al*. (2008) and Rizzollati (2008) debate the possible impact on empathy of excessive screen time, identifying that virtual reality and videos are a pale substitute in activating developing mirror neurons required for empathy. Their research suggests these neurons work best in real life, when people are face to face. Debate however rages over opposing theoretical views and suggested misrepresented facts in the relatively new phenomenon that is childhood screen time. Goldacre (2008) challenges some of Sigmans claims as he believes them to be flawed and one sided. Evolution, however has determined that we

need time, reflection and interactions to practice empathy, three things that are under pressure in our rapid technology driven world. The potential “slowliness” and nature of young children’s outdoor play would seem to this author to be conducive to the development of empathy with people and place, and an optimum environment for the manipulation and transformation of materials and objects. Burdette & Whittaker (2005) champion play as supporting attention, affiliation and affect.

Sobel (2008, p63) believes “The real world can be just as compelling as the computer world if we use design principles to construct outdoor experiences.” These principles he maintains are making forts and special places; playing hunting and gathering games; shaping small worlds; developing friendships with animals; constructing adventures; descending into fantasies and following out paths and figuring out shortcuts. Cosco (2006) and White (2014) among many others recommend similar principles. If we afford young children the world over playtime, space, loose parts, and the freedom of choice these are the type of activities they will engage in, for it is attached to our evolutionary makeup (Heerwagen & Orians 2002; Appleton 1975). I propose if every early years centre had, and appropriately utilized this type of space not only would the children’s physical activity, engagement, and well-being rise, but so too would the adults.

While this paper is foregrounding the impact of reduced outdoor play and movement opportunities on physical development the author recognizes the holistic impact across domains. Quality outdoor environments should have spaces that memories can be made in, natural arbors and dens, secret pathways, places that change with the seasons and afford a sense of belonging, ownership, of doing or just being. I suggest that these are the places

that often remain in ones memory for a lifetime (Chawla, 2006), becoming narratives of our lives, ready to spring into story for friends, for family and for grandchildren, much more permanent and relevant to us than any tick boxed outcome. These are miniscule yet momentous moments of play and we lose these environments and affordances at our peril.

Supporting services in deconstructing the Aistear (2009) themes of Well Being, Identity and Belonging, Exploring and Thinking, and Communicating from a mere written policy aim and reconstructing it as a living experience in quality play environments is now central to my work.

Sandseter (2010) describes the anti-phobic effects of thrilling experiences and risky play observed in Norwegian children. Identifying the evolutionary history of this type of play, she is also of the viewpoint that managing risk is a skill necessary throughout life and that play is a medium through which children can hone the skill. The risky play she describes would in this part of the world be a dream to some practitioners and a nightmare to others.

Hanna Rosin, in her article 'The Overprotected Kid', reports that Sweeney and Frost, two American safety consultants who, following the serious brain injury of a child in a playground in Chicago in the late 1970's, were the crusaders of playground reform across America. Commercial interests were quick to accommodate this reform and a culture of fear around playground safety was born that was spectacular in its contagion. In 2006 Frost began to realise that the pendulum had swung too far and that children were at considerable risk when a no-risk policy was implemented. One could argue that the child care inspectorate in Ireland are beginning the process of reversing the pendulum swing, as reported by some practitioners following recent inspections. This offers

better hope for the provision of risk benefit natural environments and raises the urgency of the provision of effective training and mentoring to support change.

Obesity and physical activity policy statements, guidelines, and research (Dept. of Health, 2011; Dept. of Health and Children, 2009; Dept. of Health and Aging, 2010) from jurisdictions and organisations across the developed world are fuelling growing awareness of the need for outdoor activity. While this is undoubtedly a necessary and welcome highlight, the causes of decreased access to outdoors are "complex" (Waller *et al*., 2010) and multi-dimensional. This literature review has attempted to highlight some of these complexities. Real change requires cross-sector societal co-operation, and collaboration. Green shoots, however, are beginning to break through the asphalt or indeed rubber pour, reclaiming lost ground, calming the attitudes, fears and behaviours that have been irrationally cemented in our psyche over the last three decades, decades in which policies and practices have been implemented that grossly restricted young children's access to the outdoors. Just as the toddler steps out on the uneven ground with faltering steps, the supportive adult is there to encourage and guide them. The uneven landscape of outdoor provision in Ireland is both challenging and inviting to the toddling adults, who want to move outdoors. Through this research project I aim to develop tools and resources that will support their efforts.

4. Methodology

My mentor visits, previous experience and research (Appendix A) provide me with valid and reliable evidence that practitioners need support to improving the quality of their outdoor provision. This action research assignment is timely in its execution as it provides me with an opportunity to use new knowledge gained in providing resources for ECI (Early Childhood Ireland) mentors that will go some way towards supporting quality improvement within the sector.

This small scale phenomenological action research is being undertaken from an insider perspective (Mc Niff, 2013). Guided by praxeology research methodology I ensured that the research was carried out in an ethical and inclusive manner that supported engagement and used participatory methods (Barbour, 2008). I outlined my plans to research specific training needs in relation to movement and sensory development to my ECI mentor colleagues and to a group of practicing pedagogues who I mentor on an Aistear in Action quality improvement programme. A cohort of 7 peer mentors and 30 pedagogues volunteered to take part in the research. My aim was to ascertain the levels of understanding of sensory development among this group and based on the results develop a short training programme to meet the identified needs. As it was envisaged that the mentors would at some point deliver the programme to their own groups I planned a focus group meeting with the 7 mentors to research their needs in this respect.

Three research cycles were planned as follows:

1) research cohorts level of knowledge and understanding of sensory development

2) develop and deliver a training session on sensory development for organisational use

3) evaluate impact of the training on practice for 7 peer mentors and 30 practitioners.

This research is being carried out in the spirit of collaboration and inclusiveness.

5. Research Cycles

5.1. Cycle 1: Research

The research tools used for this cycle were a questionnaire and a focus group. By means of a short quantitative questionnaire (Appendix B) the 37 research practitioners (7 mentors, 30 pedagogues) were surveyed to determine their level of understanding of vestibular and proprioception systems. I was working with all of the research participants and was able to hand out and collect questionnaires so I obtained a 100% completion rate.

A focus group meeting was then held with the 7 mentors outlining the proposed programme on movement and sensory development. Through group discussion we researched their professional development needs in relation to delivering such a programme.

5.1.1 Questionnaire Results

Two questions were asked and the responses were as follows:

1. Have you an understanding of the Vestibular and Proprioceptive Sensory Systems?

No Understanding	Little Understanding	Good Understanding	Very Good Understanding
25	8	3	1

25 Participants stated they had no understanding of vestibular and proprioceptive sensory systems, 8 had little understanding, 3 had good understanding and 1 had very good understanding.

2. Have these systems been covered previously in your own professional training/mentoring?

Not Covered	Barely Covered	Well Covered	Very Well Covered
27	9	1	0

27 participants replied these systems had not been covered in their own professional training/mentoring, 9 replied barely covered, 1 well covered, and 0 very well covered.

Analysing the questionnaires confirmed that the level of understanding of vestibular and proprioception among this cohort group was very low. The reported lack of coverage on early years training courses was consistent with previous anecdotal evidence gathered

through my mentoring work. This, I propose, is a cause of concern particularly in the current climate of relative physical inactivity for so many of our young children. Due to new learning on this Masters course I found myself in a position to develop a basic, specific and timely programme that would have utility for myself and ECI.

5.1.2 Focus Group Meeting

A focus group meeting (Appendix C) was arranged for my 7 colleagues. Based on the findings from the questionnaire I developed a PowerPoint slideshow (see Appendix D) to present to the mentors. I felt this was necessary so they could get a sense of the information that would be discussed throughout the programme.

I shared the results of the questionnaire with them and presented the draft PowerPoint 'Moving Outdoors'. I collated information on their current work activities relevant to this project. This information was useful in considering the programme content. After our discussion and further reflection on my part I decided I would include a session on language and literacy through movement, and develop a 'Hands' slideshow showing the affordances of the outdoors for developing fine motor skills. These topics would be relevant to the learners and useful for the mentors in the context of their current work. Last year's case study (assignment) 'Isabelle's Journey' documenting the affordances of the outdoor in a baby's first year of life would also be added to the resource pack.

We discussed the difficulty of presenting material that they were as yet unsure of and decided on a proposal to management for a day's training on the finished programme before delivery of same.

Methods and resources were discussed. Video clips were the most preferred resource, with a request that they be accompanied by scripts. They felt that the PowerPoint 'Moving Outdoors' gave the required information clearly and concisely and the embedded video worked well in demonstrating vestibular control.

M6 stated that some more images of children in settings would be useful and she had a collection with permissions for use that she could forward to me.

5.2. Cycle 2: Development

In this research cycle I developed a:

Programme Scheme of Work	(Appendix E)
Sample Session Plan	(Appendix F)
PowerPoint Presentation	(Appendix D)
Video Clips	(Appendix G)
Hands Slideshow/Questions	(Appendix H)

Informed by Cycle 1, the challenge now was to develop an engaging educational programme. ECI deliver courses at many levels, ranging from interest to degree level. In considering its design I was mindful of the benefit of resources that have a flexibility of

use. Compiling images into slideshows with little text allows for its use across a spectrum of programmes. The trainer situates it by choosing a reflective question with deference to the level, direction or focus required for the session. The scheme of work reflects a range of standalone sessions that can be delivered individually or as a combined programme. The PowerPoint ‘Moving Outdoors’ gives the developmental message underpinning movement. The sample session plan illustrates the format and content of a particular session. The range of resources are the heart of the programme demonstrating movement in action and bringing the theory to life.

5.3. Cycle 3: Evaluation

Due to unforeseen work commitments the mentor group were unable to undertake training to deliver the programme within the time frame of this project. It is rescheduled for August and can feed into a more detailed research dissertation next semester. I delivered a pilot session of the programme to 18 participants.

The evaluation cycle was adapted as follows:

collated evaluation sheets from 18 participants (Appendix I)

unstructured informal conversation with one of the mentors (Appendix J)

2 feedback emails (Appendix K)

I presented a 2 hour pilot session incorporating the ‘Moving Outdoors’ PowerPoint and some video clips. Engagement throughout the session was very high. The content positively impacted on the participants: they engaged in debate, relating their own stories, concerns and observations.

The evaluations were very positive. Each of the 18 participants felt the topic was very relevant to their work. 17 felt that the presentation caused them to make changes (Appendix K). If even some of these changes were implemented it would be a good quality return for a 2-hour input.

The conversation with M4 confirmed the wider application and usefulness of the programme content across a range of scenarios. It also highlighted the requirement of support and training for mentors prior to delivery. I have since secured this professional development support for mentors.

The feedback emails from ECI's Head of Practice and an Early Childhood Specialist. were also very positive. Both evaluators picked up on the affective nature of the resources and their ability to "hook" the learners in. Both parties have since requested delivery of the programme in their areas.

A more in-depth evaluation will be undertaken when more of the programmes have been delivered.

6. Discussion

The message of movement has been explored in both assignments. Outdoors as an optimum environment for children's movement is an underpinning principle of this paper. Moving people affectively and cognitively to recognize the human right and value of outdoor play and experiences for our young children is a principle goal of the training I have developed. There has been a potent and affective reaction to the visual material

developed for this programme: “Oh Carol, it’s really lovely”, “ finding the extraordinary in the ordinary”, “Capture their minds and hearts” (Appendix K). Storytelling and sharing life stories are fundamental to achieving this. Showing the child engaging in play outdoors is much more potent than talking about it. Alterio & Mc Drury (2003) claim that storytelling and life stories provide potent learning tools for adult learners. Care and education in the early years cannot be separated; they are synonymous with quality. The early years profession separates heart from its principles, policies and practices at its peril, and so too does the mentor. I truly believe in the importance of affect, the centrality of connection.

The sensory integration of heart and mind (Hannaford, 2005) observed and experienced in meaningful life moments by this researcher during this project have been a powerful tool in eliciting change and improvement in my practice. Having gained a greater understanding of the developmental messages underpinning movement I was free to explore creative ways of sharing this information. The increasing ease with which we can record and share images and stories lends many affordances to the learning world for both adults and children. Kress (2003) discusses new forms of reading where texts “show the world rather than tell the world”. I was mindful of showing the world through the eyes of a child, reminding or introducing the viewer of the simple yet exquisitely interesting world to be found moving around a natural space regardless of its size. The programme discusses a range of reasons why movement and outdoors are so vital, and what consequences we are experiencing because of the lack of it. This action research project demonstrates what can be achieved when a community of learners share their knowledge, their way of knowing, and their outdoor play values. Isabelle, in a symbiotic fusion of case study and action research, has shared her journey with us, providing us

with insight and appreciation of affordance. A programme has been developed that celebrates movement, sensory development and the outdoors hopefully it will serve to move children both metaphorically and physically outdoors.

7. Conclusion

Putting this training programme together has really consolidated my learning, providing me with a clarity that will be essential for its delivery. This small programme, while no panacea for all the challenges that face outdoor provision within the sector, is arousing interest among the cohort group and within my organisation. In an exciting new development ECI has collaborated with Airfield Trust, a city farm and park, to deliver a series of outdoor play and learning training events. Their substantial grounds will enable us deliver most of the training in the outdoors. Bixler, Floyd & Hammit (2002, in Waite, 2010) state that “The most effective way to persuade staff of the value of outdoor learning was by them experiencing it for themselves.” The programme and resources developed as part of this assignment will be utilised throughout the training. We have been overwhelmed at the booking response and are having to schedule four more events. Adapting some of the course resources for use on the web is also in negotiation. The tide I do believe is turning. My strategy for raising awareness has been researched and developed. Now it is a case of implementing it and I am excited at the prospect.

Sitting in my garden typing these final words I realise I have come full circle, finishing as I started, in a small garden on another hot day. Only this time I am testament to this papers premise as I am moved and enriched, in body, mind and spirit by the beauty of the natural world around me and the opportunities that it affords me.

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APPENDICES

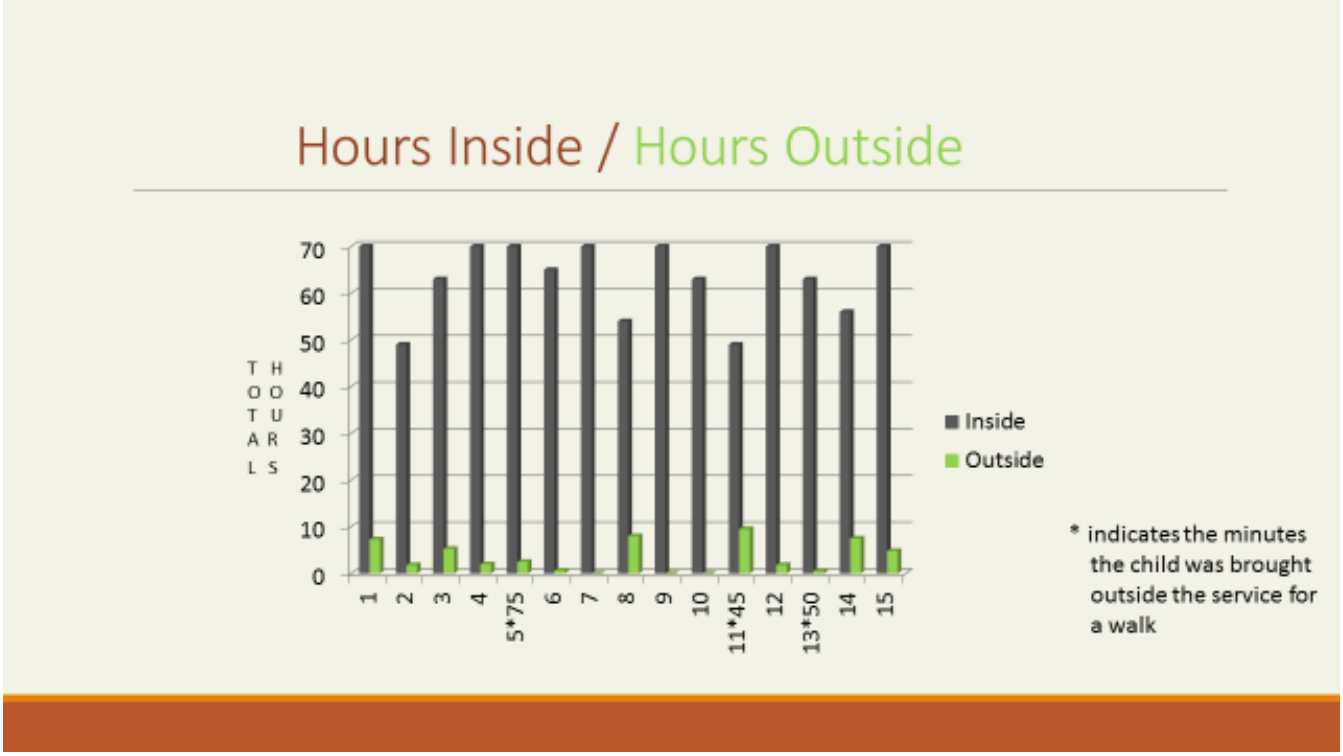
APPENDIX A

Pilot Study Findings

These findings were part of a pilot study I conducted in 2012 with 15 full day care services across the urban rural divide who were attending ECI training courses.

A staff member in each setting volunteered to chart the amount of time one child in the age range 6-18 months spent outdoors over a period of 10 consecutive days (excluding weekends) in November 2012.

The findings were as follows:



Setting	Total Hours Child attended setting over 10 days	Total Hours over 10 days child was outdoors (within setting)	Total hours over 10 days child was outdoors outside perimeter of setting (during day care hours)
Setting 1	70	7h.30m	0
Setting 2	49	1h.30m	0
Setting 3	63	5h.30m	0
Setting 4	70	2h.00m	0
Setting 5	65	2h.20	1h.15m hours
Setting 6	70	0h.40m	0
Setting 7	65	0h.00m	0
Setting 8	54	8h.00m	0
Setting 9	70	0h.00m	0
Setting 10	63	0h.00m	0
Setting 11	49	9h.52m	0h.45m hour
Setting 12	70	1h.50	0
Setting 13	63	0h.30m	0h.50m hour
Setting 14	56	7h.30	
Setting 15	70	4h.50m	

In total over the 10 days 3 of the children were not outdoors at all over the period, 5 were outside between 1 and 2 hours, 3 between 2.30 and 5.30 hours, and 4 between 6 and 10.37 hours.

APPENDIX B

Vestibular and Proprioceptive Questionnaire

Participants on two ECI training courses were offered the opportunity to take part in an action research programme. Volunteers were asked to complete a short questionnaire. 30 pedagogues were randomly selected. 7 peer mentors who formed a focus group for the purpose of the research also completed the questionnaire, bringing the total to 37.

Vestibular and Proprioception Questionnaire

Questionnaire for ECCE staff re. Vestibular and Proprioceptive Sensory Systems

Thank you for agreeing to complete this questionnaire. Please circle the answer which applies to you.

Question 1.

Have you an understanding of the Vestibular and Proprioceptive Sensory Systems?

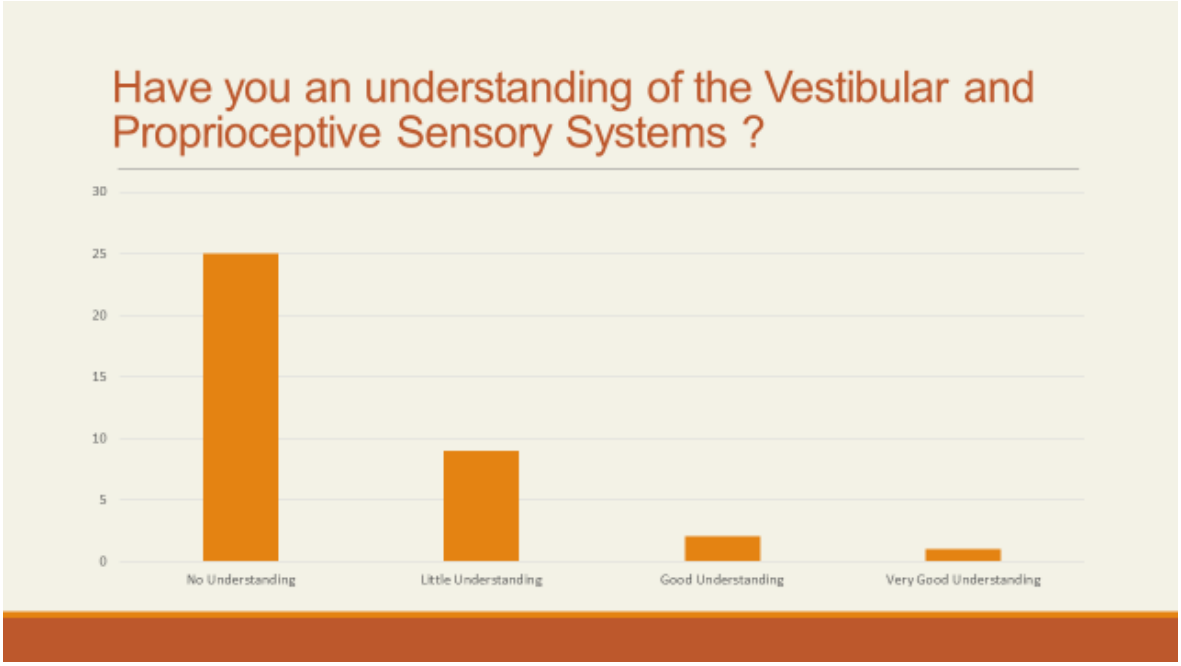
No **Little understanding** **Good understanding** **Very Good Understanding**

Question 2.

Have these systems been covered previously in your own professional training/mentoring?

No **Barely Covered** **Well Covered** **Very Well Covered**

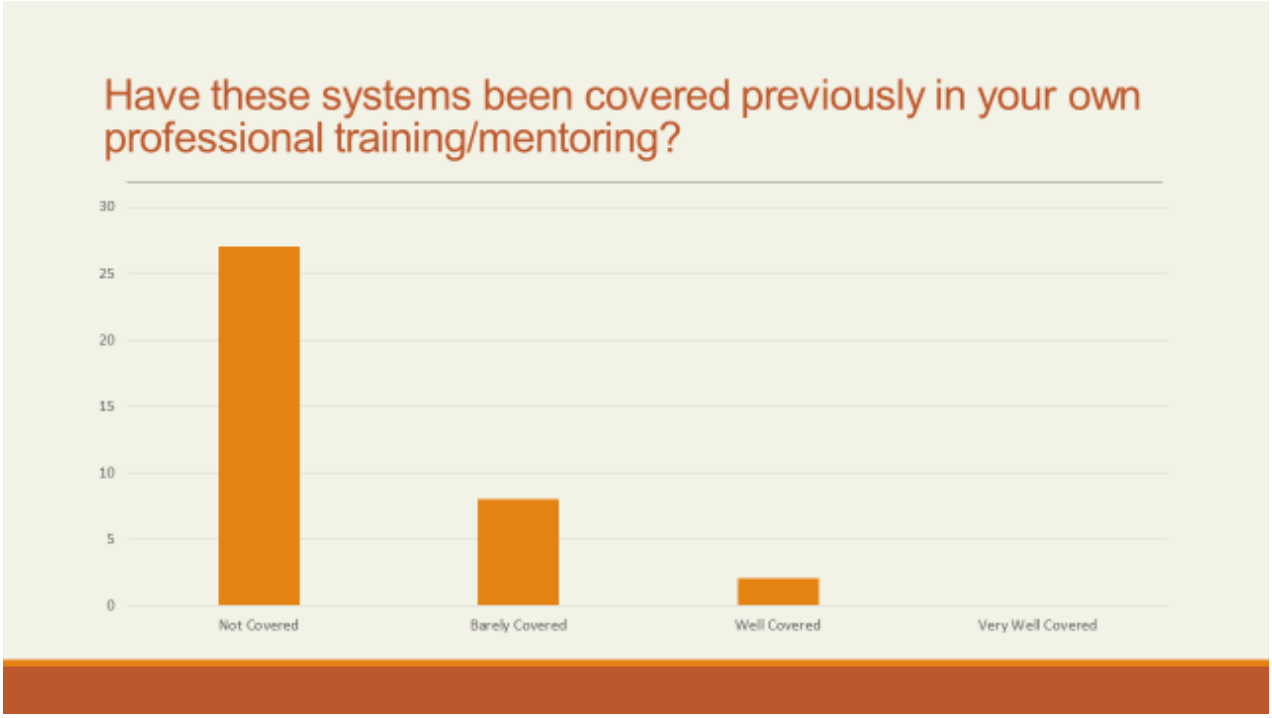
Questionnaire Findings



Question 1.

Have you an understanding of the Vestibular and Proprioceptive Sensory Systems?

25 Participants stated they had no understanding of vestibular and proprioceptive sensory systems, 8 had little understanding, 3 had good understanding and 1 had very good understanding



Question 2.

Have these systems been covered previously in your own professional training/mentoring?

27 participants replied these systems had not been covered in their own professional training/mentoring, 9 replied barely covered, 1 well covered, and 0 very well covered.

APPENDIX C Focus Group Meeting

Focus Group Meeting Early Childhood Offices 7th May 2014

In attendance 7 Colleague mentors and 1 researcher

I welcomed them all and gave a quick overview of the project. I shared the results of the questionnaire with them and presented the draft PowerPoint I had developed on Moving Outdoors as I felt this was necessary so they could get a sense of the information that would be discussed throughout the programme. The mentors were then asked to identify any of their current work that would be supported by this project.

I collated information on their current work activities relevant to this action research project

Mentor	**Current work that is relevant to project**
M1	Coordinating and supporting mentors. I'm not directly involved with services but this will be relevant for me in supporting the mentors.
M2	Working on Language and Literacy project with services. That piece on the PowerPoint about early movement and literacy was very interesting. That would be very useful for what I'm working on.
M3	Working with 7 services in the city centre area. Their outdoor environments are generally poor quality so I'm open to anything that will help.
M4	Working with 6 groups on Aistear programme. This will be great for helping them with their outdoor provision. They are all in need of some improvement and 1 space is quite problematic. It will be great to get some support for this for them and me.

M5	Working with 6 services on Aistear, Their outdoor provision seems mixed. I only recently started with them so not sure of their attitudes around the outdoors yet.
M6	Currently working on Baby Room project so I'm delighted about your focus on the babies and toddlers.
M7	Currently finishing up work on the Dining experience in Full day Care but will be starting Aistear programme with groups in September so this will be relevant.

This information was useful in considering the programme content. After our discussion and further reflection on my part I decided I would include a session on supporting language and literacy through movement, and develop a 'Hands' slideshow showing the affordances of the outdoors for developing fine motor skills. This would be useful to depict both early language and literacy and the affordances of natural materials. It would also provide material for mentors on some of their other programmes, thus maximizing the use of the resources. Last year's case study (assignment) 'Isabelle's Journey' documenting the affordances of the outdoors in a baby's first year of life would also be added to the resource pack.

APPENDIX D

Moving Outdoors PowerPoint

On CD

Also emailed to tutor (on Windows ONE DRIVE)

APPENDIX E Programme Scheme of Work

Moving Outdoors

Training Programme for Outdoor Play and Learning

Scheme of Work

Aim:

To raise awareness of the sensory motor systems and the affordances of outdoor play to their development

Objectives:

To identify the internal and external senses and outline their role and function

To state the importance of movement for a young child's health, development, and well being

To recognise the importance of sensory motor development to the young child

To recognise the affordances of outdoor play and experiences to a child's holistic development

To identify the role of movement in developing reading and writing skills

Session	Content	Resources
Session 1	The Importance of Movement Vestibular and Proprioception Systems	Moving Outdoors Powerpoint Digging clip
Session 2	The Affordances of Outdoor Play	Isabelle's Journey Climbing Clip. The Look and Learn
Session 3	Movement Supporting Literacy	Throwing Game clip Hands video

APPENDIX F Sample Session Plan

Training Session devised to introduce the importance of early movement for later literacy skills

Movement Training Programme

When you read you begin with ABC…….. or maybe not!

How movement builds our reading and writing skills.

Aim:

To raise awareness of sensory motor development and its importance in developing literacy skills.

Objectives:

To identify the internal and external senses and outline their role and function

To recognise the importance of sensory motor development to the young child

To appreciate the potential of outdoor play and experiences in the development of the senses

To support the development of literacy skills through movement

Sample Session Plan

Time	Content	Method	Resource
To be decided	Introductions/Welcomes	Large Group	
	Opening Conversation to assess Group Profile Level of understanding/prior learning of sensory development systems Type of work undertaken with children and age range of children	Discussion	
	Movement Powerpoint	Presentation and Discussion	Powerpoint/ Movement/
	Experiential Exercise Read this sentence, now what do you hear inside your head? Are you speaking the words to yourself as you read them?	Experiential Exercise	Sentence on Sheet Paper
	Experiential Exercise Write a few words to finish this sentence any way you wish. I opened the door and……	Experiential Exercise	Sentence on Sheet Paper
	Experiential Exercise Cursive writing V Printing (Hand Dev)	Experiential Exercise	Sample children's drawings
	How the outdoors can support sensory motor development and reading and writing	Presentation and Discussion	Powerpoint Isabelles Journey/video clips
	The Throwing Game video as a tool to demonstrate matching of sight, sound, voice in action Each group watch video clip and look for matching of	Experiential Exercise	Video Clip The Throwing Game

	Group A: Sight/ Sound Group B : Hearing/Voice Group C : Movement Look for movement skills	3 Small Groups	
	Divide into pairs look through the images provided choose one image each and explain to your partner how it supports the child's sensory motor development	Experiential Exercise Pairs spread range of photos around table or floor	Assorted photos of mixed ages
	Closing round Name one thing you are committed to trying to improve children's movement	Closing Round	

Information that can be given throughout session

To read and write we need an appropriately developed sensory motor system

Powerpoint introduces

Vestibular and Proprioception Systems Development

Balance, Coordination, Muscle Tone, Strength, Sensory Processing

e.g. Scenario on Supporting Balance

If you give too much physical support to children you can confuse their systems. A child who is continuously supported to walk by the adult walking with them holding their hands over their heads gets confusing messages through their central nervous system about walking and balancing. Supporting them to do it themselves is much better for

their development. They will naturally practice walking using their arms to balance themselves thus sending the right signals to the brain about their body segments. This allows their neural and musculoskeletal systems work out the adjustments they must make to maintain balance and movement. Young children need lots of movement, time and practice to mature these developing systems.

Physical necessities for writing and reading: sense of direction, postural control, muscle tone.

The ability to match sights and sounds together will take many years to develop and it is an essential life skill we also need it to be able to read and write.

Reading and Writing

Reading requires the translation of visual symbols on a page into an internal auditory image that we can “hear” inside our head.

To complete this task you had to hear the idea or image to transfer it onto the page.

We translate the idea (or image) in our head into a visual image on the page (words). You hear the words/ideas in your head and write them on the page.

Therefore, the matching of visual and auditory stimuli and vice versa are important for many aspects of higher learning.

Cursive V Printing

Learning to print block letters first is an unnatural challenge to young children.

Printing is a highly linear process as opposed to the rhythmic flow of cursive writing.

Lack of hand development at preschool age, asking them to complete a far more complex process by asking them to print. Crawling first, then pulling themselves up, using upper body in all manner of ways developing strong muscles from the neck, downwards and outwards, activities that supports development of fine motor skills. All of these movements are required to prepare the child for writing.

Matching Sight and Sound

Babies and young children need lots of experiences matching sights and sounds in their environment to wire up their sensory processing system.

The matching process also involves the motor system.

Eye movements to locate a source are a motor ability that have to be developed.

Speech and Voice

Speech requires the control of the muscles at the front of the mouth and enable us to give voice to our thoughts, ideas, and feelings.

Use of the voice in play, speech, rhyme and song can help to develop orientation, attention, sound discrimination, and memory. It also helps to improve listening, memory and articulation. As your inner voice goes to your two ears it has a centralising function and comes from your centre having the effect of self-orientating.

Our hearing locates sounds that come from outside and helps us to orientate ourselves externally.

Voice is outwardly directed but self-orientating whereas hearing is inwardly directed and outwardly orientated.

All of these things combined contribute to our developing brain and as our sensory processing systems feed information through our central nervous systems and back to our musculosketal systems we learn new ways of being in and using our bodies to live life.

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APPENDIX G Video Clips

A range of video clips/slideshow that are interchangeable to suit particular training requirement/focus

Observation 1	Isabelle Digging Video Clip 34 secs	On CD
Observation 2	Climbing the Barrier Video Clip 33secs	On CD
Observation 3	The Throwing Game Video Clip 2 mins 34secs	On CD
Slideshow	Hands (Or can also be run as a slideshow on Outdoor Affordances)	On CD

Also emailed to tutor (on Windows ONE DRIVE)

APPENDIX H Hands Slideshow /Reflective Questions

Rationale

I have developed this slideshow as resources for the Movement Training Programme.

It has a particularly natural theme as in this instance I want to promote the affordances of outdoor natural spaces and materials such as wood, water, stones, sand, soil, and grass, etc. This resource has a variety of possible uses depending on the context and the objectives of the particular training situation. The image may stay the same but the focus and reflective questions can range from the simple to the complex. This is why I refrained from putting a lot of text on it. This affords the opportunity for the resource to be used more widely on all levels of training or presentations with families, or with professionals.

POSSIBLE REFLECTIVE QUESTIONS

How did you feel looking at that?

How many different actions did the hands make, why might that be important?

What type of materials were experienced? What benefits might that provide?

What sensory stimulation might the child have received through those experiences?

What physical progression do you see in the hand throughout the slideshow?

How might these experiences support physical…… cognitive….literacy…eco literacy etc?

How many of these experiences /materials are available to your children?

How could you provide them?

I feel it is a relaxed and affective introduction to sensory motor development, affirmation to those already providing the experiences and hopefully encouraging others to think about it.

I am also currently collating images of children engaging outdoors in urban settings with man-made structures and materials which I can later merge with these to create a more inclusive view of outdoors.

APPENDIX I Presentation Evaluation Sheet

Presentation Evaluation Sheet

Thank you for your time in completing this evaluation sheet

Please circle the answer which applies to you

Question 1.

Has the presentation been relevant to you as an ECCE practitioner?

No Somewhat Relevant Very Relevant

Question 2.

Has the presentation caused you to consider making any changes to your work practices?

No Yes

(If yes could you please give a brief outline of change?)

Brief Outline:

Evaluation of Pilot Movement Session

18 pedagogoues: 18th June 2014 2 Questions

Question 1

Q I. Has the presentation been relevant to you as an ECCE practitioner?

No	Somewhat relevant	Very Relevant
0	**1**	**17**

17 respondents answered very relevant, 1 answered somewhat relevant and

0 answered no.

Question 2

Q 2. Has the presentation caused you to consider making any changes to your work practice? Yes or No (if yes please give a brief outline of change)

No	Yes
1	**17**

17 respondents answered yes they would consider changes which are outlined below.

1 respondent answered no.

Number	Yes/ No	Comment if yes
P1	Yes	Children need to be more active
P2	Yes	Introducing more opportunities for movement Change in own attitude to children taking "risks"
P3	Yes	Change approach to how children learn and move. I learned about the importance of not restricting children to how they learn through their senses
P4	Yes	It would encourage me step back and let the child lead what they would like to do and take time to listen and get to know each child's capabilities rather than the group as a whole.
P5	Yes	Take more notice be more aware of movement. Be more observant
P6	Yes	I will view spontaneous movement and action with a different lens, no more "don't be jumping inside", etc., instead just make sure they have space to do it
P7	Yes	Let Children move more
P8	Yes	More Movement Less Sitting
P9	Yes	More uneven surfaces (natural surfaces) More risk taking play
P10	Yes	More play in natural environments, More outdoor play More opportunity for cursive writing
P11	No	_____
P12	Yes	I found this very interesting and would love to hear more, posture control and movement are taken for granted every day and simply allowing children to move around more freely is simply looking after wellbeing – Well Done
P13	Yes	Think about movement practices

P14	Yes	Allow the children to engage in lots of movement which could help them develop well in all areas
P15	Yes	Allow more outdoor play to encourage movement
P16	Yes	Allow for more opportunities not only for movement but also balance and lifting heavy objects
P17	Yes	More movement
P18	Yes	More freedom to move

APPENDIX J Conversation with Mentor 4

Mentor 4 10.15 am 16th June R = Researcher M4 = Mentor 4

R. Did you get a chance to do anything on movement yet?

M4. I haven't had much of a chance to get stuck into it yet Carol but I used the Power-Point slides yesterday with my Aistear group because we had been talking about heuristic play and treasure baskets with the babies so I thought that would link nicely. The PowerPoint was easy to follow. I kept to the slides and used the few examples you gave us at the focus group. I'm still only getting used to it. I didn't go into any great detail but it was fine for where they are at the moment. It generated good discussion, they seemed to enjoy it.

R.. Are you finding the information useful?

M4. Definitely. I've found it has informed my other work as well (site visits). I wasn't putting enough emphasis on the senses and movement when I was talking about the benefits of play. I found it really helpful when I was on my visits last week. I was talking to the women in the baby and toddler rooms and I started talking with them about the senses and movement and we were chatting about what they provided for the toddlers and how much movement they got during the day. I'm looking at the rooms now in a different light to see if there's enough space for them to move, and I'm asking them about going outside, like when they bring them out and how long they stay out. The weather was great last week so they had them out a lot. Mind you that crèche has a nice bit of a garden up at the back of the matted area. Have you any new ideas for sensory stimulation for the babies outside?

R. I've just finished a small Hands slideshow that we can use as a resource for the programme. I can show it to you now on the PC.

M4. Oh Carol, it's really lovely, they'll really love that when they see it. (Talking about her group of mentees) I told them we'll be working on indoor and outdoor environments at our next cluster meeting so I will definitely use it for the outdoor piece. It just gets you thinking about the way they use their hands. It brings it alive too. I can put a bit of focus on the natural materials as well because there's a lot of plastic in two of the gardens in particular. The question sheet is a good idea. You could ask them as well **"How many of these experiences /materials are available to your children?"** Those resources will be really useful for us, when you get it finished. Will we get a chance to go over it all together? I think we should all see it together, maybe at the next team meeting**. It would be good to go over the video pieces with you to make sure we are giving the right information.**

R. **Thanks I'll stick that question onto the sheet. I'm going to ask M1 to arrange a day's professional development training for anyone interested in delivering the programme**. I'm delivering part of it to a group on Wednesday at a two hour session so I'll be able to evaluate it afterwards. If you have any questions on any of it just ask.

M4 Thanks will do**.**

APPENDIX K 2 Feedback Emails Transcribed (originals on CD)

From: Carmel Brennan

Sent: 22 July 2014 16:05

To: Carol Duffy

Subject: re workshop

Carol

Thank you for sending me the workshop. This is a great workshop, perfectly pitched to engage early childhood educators. The key elements of the workshop – that will ensure a trainer meets the stated objectives are (i) the experiential exercises and (ii) the videos that offer participants first hand observations. The movement powerpoint at the beginning will serve as a hook to engage and inspire participants because it will capture their minds and hearts and link them to their own memories. They will know the feelings. Similarly the other Powerpoints of Isabelle's journey and the Throwing Game will allow participants to see for themselves and to bring their knowledge and experience to what they see. At the same time, it allows the trainer to extend their knowledge. Participants therefore get to hone their observation skills, extend their knowledge and understanding and feel empowered to facilitate similar experiences. The experiential exercises allow them to experience how the brain decodes messages received through the senses – and thereby the importance of body-brain connection. This is critical to them making a commitment to support children's movement.

The final photograph exercise supports their analysis skills, develops their language for explaining children's development and leaves them with a feeling of competence so that they're ready to commit to action.

Minor recommendations – (i) Objective 3 - better to say – to name/ identify/ recognise rather than appreciate –

(ii) suggest including readings as handout because I think participants will be motivated to read more following this workshop.

Kind regards Carmel

Dr. Carmel Brennan

Head of Practice Early Childhood Ireland Hainault House, Belgard Square South, Tallaght, Dublin 24

Tel. 01-4040691 | Mobile. 087-650 3644 | Fax. 01-4057109 | www.earlychildhoodireland.ie

Hi Carol

Why are you not travelling around the country (and internationally) these videos and PowerPoint are really amazing – inspirational. You really can find the extraordinary in the ordinary.

As a trainer I would be really excited to use your work, your use of images inspires and brings learning to life. These images and videos would engage learners at all levels and your research provides a wealth of knowledge, particularly in relation to the internal senses. Your pilot research shows clearly there is little understanding of these sensory senses, however your work supported by the images and videos high-lights the crucial role of movement from birth in their development.

Honestly Carol, AMAZING!!

Could not access document files, so did not comment on them – hope that ok.

Kind regards

Mary

Mary Skillington
Early Childhood Specialist

Early Childhood Ireland

APPENDIX L Ethics Form

Request for Ethical Approval

Section 1 – to be completed by the researcher

Full name	Caroline Duffy
Module number and title (student researchers only)	EDU 7135 (Physical development)
Research Proposal title	A) Child Observations B) Physical Development Research
Funding body applying to if applicable	
Brief outline of proposal (including research questions where appropriate) You are also asked to submit with your application copies of any questionnaires, letters, recruitment material you intend to use if	Assignment A A series of child observations analysing an eighteen month old child 's physical development I propose to include and involve the child's parents in every stage of this study We have discussed and agreed the parameters of the data collection and I invited their contributions and involvement throughout the entire process. It

these are available at the time of requesting approval	was agreed that I will observe the child periodically over a few months taking photographs, videos and notes. The parents will also keep me informed of changes they notice in their child's ongoing physical development. Assignment B In partnership with a small cohort of my peer Early Years mentors I will research (through focus group and questionnaire) the professional development needs of these mentors in relation to physical development. I propose to devise and deliver a training workshop for the mentors (based on my learning from this course). One month after the workshop we will jointly evaluate the impact of this training on their mentoring practice
Level of research, e.g. staff, undergraduate, postgraduate, master's (award related), MPhil, PhD	Postgraduate
Please outline the methodology that would be implemented in the course of this research.	Assignment A Phenomenological observations of the child will be collected and collated. The mode of observation used will be video footage and photographic images and notes. Assignment B Participatory action research methodology will be implemented. Data from a baseline questionnaire and a focus group will be collated to determine the professional development needs of the cohort in re-

	lation to promoting physical development strategies. A training session will be developed and delivered to the mentors. A month after the workshop a focus group will evaluate the impact if any of this training on their mentoring practice. Voluntary informed consent underpinned by the BERA Ethical Guidelines for Educational Research will be obtained from all research partners in both assignments A and B
Please indicate the ethical issues that have been considered and how these will be addressed.	In undertaking both these assignments I intend to enact Gormans (2007) ethical research principles of Autonomy, Beneficence, Non- Maleficence, and Justice. Assignment A By including and involving the child's parents in every stage of this study I will endeavour to act in an ethical manner and live my values and beliefs in relation to partnership with parents. Parents gave informed consent for this study, All video and photographs will be taken in the presence of at least one parent. The child's rights, needs, and comfort at all times will take priority over any data collection. The child in question is my granddaughter and I have opportunities to observe her without causing her any distress or undue attention. As I am tuned into her ways of being I will immediately know if she is a consenting party on any given day and will

	abide by her needs and rights in relation to observation. Assignment B The mentors will be fully informed of each element of the research process and will have absolute autonomy over their participation in the programme. Participatory methods will be implemented as all participants will be included and involved in devising agreed protocol for focus groups and data collation. Respect for confidentiality and anonymity will be maintained throughout the process.
Please indicate any issues that may arise relating to diversity and equality whilst undertaking this research and how you will manage these.	Assignment A I do not foresee any diversity and equality issues in relation to this assignment as respect and consideration will be maintained for all parties in this undertaking. Assignment B This research is being carried out in the spirit of collaboration and inclusiveness. It aims to be a supportive and empowering endeavour that will ultimately benefit the participants in their professional role. By implementing an open and transparent approach to the research I hope to ensure such issues do not arise.

Please indicate how participants will be debriefed about their involvement in the research process and or provided with opportunities for reflection and evaluation	Assignment A The parents will be involved in the collection of data. Accounts and findings will be jointly discussed and the parents will have opportunity to negotiate the content. Where appropriate we will also share the video and photographs with the child naming for her what she was doing and affording her opportunity to enjoy and comment on her actions. Two copies of the completed study will be presented to the family one for parents and one for their daughter for her future perusal. Assignment B The research partners will be also be treated with the same respect and afforded the opportunity to negotiate content, share reflection and evaluation. Copies of the completed research will also be made available to each of them.

Please answer the following questions by circling or highlighting the appropriate response:

1. Will your research project involve young people under the age of 18?

YES NO

If yes, do you have an Enhanced Disclosure Certificate from the Criminal Records Bureau?

YES NO

I have the equivalent Garda Clearance Certificate in Ireland

2. Will your research project involve vulnerable adults?

YES NO

3. For which category of proposal are you applying for ethical approval?

Category A B

Signed.....Carol Duffy.....

Date.....14/3/2014.....

Signed copies arriving by post

APPENDIX M Assessment Criteria

MA Education Assessment Criteria

EDU7135 (Research in Professional Practice: Double Module)

Assessment Criteria				
Fail (0%-39%)	**Borderline Fail (40%-49%**	**Pass (50%-59%)**	**Commendation (60%-69%)**	**Distinction (70%-100%)**
Critically evaluate a range of academic literature, research methodologies and data collection methods.				
The range of research and scholarship that has been consulted is very limited and there is little, if any critical evaluation.	An emerging demonstration that research and scholarship has been consulted and some evaluation has been offered, but it was very limited in its extent and/or lacked criticality.	Some critical comparison has been carried out using diverse sources and appropriate conclusions have been drawn.	Key research and scholarship has been identified using a range of resource types. Principles of critical evaluation have been adopted in the review of the research and scholarship.	The critique of the work under discussion covers all relevant aspects and draws from a range of resource types There is a confidence in the way the material is handled and discussed
Analyse a range of primary and secondary data and report your findings.				
Analysis is limited to description and limited,	An emerging demonstration of ability to	The choice of analytical meth-	The approach is fully justified. The analysis is detailed	The research is thoroughly re-

if any conclusions are drawn from the data.	choose appropriate analytical methods and draw conclusions from the data, but insufficient for achievement at this level.	ods and the interpretation of data are justified with some alternatives considered. An attempt has been made to integrate the findings into the study as a whole.	with clear and valid conclusions drawn. The conclusions form an essential and integrated part of the study as a whole. The research is critically reflected upon for its contribution to own practice and/or an organisation's practice.	viewed for its potential contribution to professional knowledge/ practice in the public domain. The analysis is presented in a way that demonstrates a clear commitment to the work and a complete grasp of the methodologies adopted. The conclusions are discussed with confidence and clarity and supported throughout by the analysis of the findings.
Reflect upon what you have learnt from your research and how it will impact on your future professional development.				
There is an absence of critical reflection on the research and possible impacts on future professional development have not been considered.	Emerging evidence of critical reflection on the research. Superficial consideration given to possible impacts on future professional development.	Evidence of critical reflection on the research and consideration given to possible impacts on future professional development.	Critical reflection has been applied to a range of aspects of the research and there is evidence of insight when considering possible impacts on future professional development.	The critical reflection was comprehensive and perceptive. A comprehensive and insightful range of impacts on future professional development has been considered.

Collate and organise appropriate documentary evidence in a logically structured, well presented and clearly written format using the Harvard referencing system.				
Significant errors in basic skills leading to a muddled and difficult to read piece of work. Very limited use of sources and little attempt to reference accurately.	Many minor spelling, punctuation or grammatical errors are evident. Some reference to key documentation and sources is included but not always usefully. An attempt to use the Harvard system is evident but often inaccurately handled.	Good basic skills and organisation are evident. Key documentation and sources are referred to through a generally accurate use of the Harvard system.	A carefully constructed and well-presented assignment. A wide range of documentation and sources has been carefully used to justify the position taken. The Harvard system is accurately used.	A carefully constructed and expertly presented assignment. Fully appropriate and extensive range of documentation and sources expertly used to justify the position taken. The Harvard system is accurately used.