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## Child's play the developmental benefits of the play choices of modern children: Implications for school curricula

Doireann O'Connor

*The University of Notre Dame Australia, dee.oconnor@nd.edu.au*

Tracy Treasure

*The University of Notre Dame Australia, tracy.treasure@nd.edu.au*

Christine Robinson

*The University of Notre Dame Australia, christine.robinson@nd.edu.au*

M McCormack

V O'Rourke

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# CHILD'S PLAY

## THE DEVELOPMENTAL BENEFITS OF THE PLAY CHOICES OF MODERN CHILDREN: IMPLICATIONS FOR SCHOOL CURRICULA.

*O'Connor, D<sup>1</sup>., Treasure, T<sup>2</sup>., Robinson, C<sup>3</sup> McCormack, M<sup>4</sup>., O'Rourke, V<sup>5</sup>.*

<sup>1</sup>*The University of Notre Dame (AUSTRALIA)*

<sup>2</sup>*The University of Notre Dame (AUSTRALIA)*

<sup>3</sup>*The University of Notre Dame (AUSTRALIA)*

<sup>4</sup>*Dublin City University (IRELAND)*

<sup>5</sup>*Letterkenny Institute of Technology (IRELAND)*

### Abstract

This paper presents data from the Irish Neighbourhood Play Study. The Irish Neighbourhood Play Study explored the play choices of children from 0 to 15 years of age. This paper reports the findings on the play choices of children and these are presented alongside the levels of engagement within each play type. Construction Play, Motor Play, Fantasy (Imaginative) Play and Social Play are all applied as broad categories with detailed data presented that drills down into what elements of play children are choosing within each category. The developmental benefits of each play type are then explored and discussed. These findings are viewed through an educational lens and contextualised within a curricular context. The critical questions arising from the findings concern the developmental benefits inherent to the types of play children choose for themselves and how these developmental benefits translate to the school context. This paper discusses these critical questions and suggests possible implications for school curricula when adopting play-based approaches.

Keywords: The Irish Neighbourhood Play Study, Play, Early Childhood Education, Play, Play Curriculum, Play-based Learning.

## 1 INTRODUCING THE IRISH NEIGHBOURHOOD PLAY STUDY

The Irish Neighbourhood Research Study was a large scale research project which included almost 1700 participant families across 240 communities throughout Ireland. The research study was initiated, shaped and resourced by The Institute of Technology, Sligo and Early Childhood Ireland to investigate the play choices made by children aged 0-15 years of age. The research team used parental surveys and naturalistic observation to secure data on how children in modern Ireland aged 0-15 are playing in their neighbourhood. An all-island approach was taken incorporating cities, towns and rural areas across a variety of socio-economic groupings. While the study involved both quantitative and qualitative data collection. The findings of this paper arise from a series of 240 quantitative observations of neighbourhood play spaces throughout rural and urban Ireland.

## 2 METHODOLOGY

This was a descriptive study designed to uncover children's play patterns in modern Ireland. A large scale quantitative observation study was carried out. The study sought to uncover the extent to which children play outside, the types of play they are predominantly engaged in, the places children play, the influence of external factors such as socio economic grouping, rural/urban location, organised sports and homework on play and the impact of the physical environment on children's play choices. The observational data was collected during the months of June and July 2012.

The sampling technique utilised was non-probability sampling, which is appropriate when access to a comprehensive sampling frame does not exist. The sampling technique employed was purposive sampling (Robson, 2011, p. 75); 18 regions across the island of Ireland were selected to maximise representation across geographical regions and socio economic regions. For Southern Ireland, the

Haase-Pratschke Index of Relative Affluence and Deprivation (revised from Central Statistics Office, 2012) was employed, alongside the Northern Ireland Multiple Deprivation Measure (Northern Ireland Statistics and Research Agency, 2010) to inform selection of target locations.

Naturalistic observation (Geller, Russ & Altomari, 1986; Loucopoulos & Karakostas, 1995), was carried out to gather data on the behaviours of children at play. Observation was overt and non-participant in nature, and occurred in playgrounds and communal play spaces. While participant observation has its merits when researching children, children may feel uncomfortable communicating with unfamiliar adults (Punch, 2002), therefore it was decided to employ non-participant observation, as adults are unable to truly participate in children's social worlds (Fine & Sandstrom, 1988; Hill, 1997). Data collection was guided by 'The Children First: National Guidance for the Protection and Welfare of Children' policy (Department of Social Protection, 2011), The Convention on Rights of the Child (United Nations, 2010) and the Data Protection Act (Government of Ireland, 2003). Research Ethical Approval was granted through The Institute of Technology, Sligo. Observations were short term in nature, approximately three minutes, which facilitated a focused data collection of children's play in the context of behaviours and the surrounding environment.

Data was collected utilising a simple coding system (Robson, 2012, pp. 337) which captured data on variables including age, gender, extent of peer interaction, type of play environment, play objects used, instances of interaction with nature and/or electronics and the type of play children were engaged in. The population of interest was all children aged between 0 and 15 who resided on the island of Ireland in June – July 2012. Corresponding with the survey research, the sampling technique employed was purposive sampling, external play areas within the previously determined geographical and socio economic locations were observed. The final sample size achieved was 240. Data was analysed quantitatively; frequencies and cross tabulations were performed.

### **3 FINDING AND DISCUSSION: SIXTEEN TYPES OF PLAY EXPLORED AND EXPLAINED.**

Hughes (2002) taxonomy of play provided a framework for the observational tool. As such, play was recorded across his 16 categories of play. While presenting the data on what play choices children are making across these 16 play types, it is also important for us to introduce and explain each of the 16 types of play which feature within the observation tool. The following explanations are centred on both describing the type of play and elucidating its developmental and educational benefits. These educational benefits hold great significance for early childhood educators designing and implementing play-based approaches to curriculum and learning.

The sixteen types of play are presented alongside the data in section 3.1 to 3.16.

#### ***Imagination based play***

Within the 16 types, there are six which fall broadly into the categorisation of imagination based play. While this type of play is one of the most potent and beneficial for children under the age of 8, it does reduce through middle childhood and all but disappears as children lose their ability to symbolically represent (the ability to replace a crucial element of their play with an available object such as a towel for a cape or a bottle for a baby). Over all 240 observations, only 43 or 14% of the total play observed was imagination based. These were spread over the following six types of play.

#### **3.1 Role play**

Role play is play where the children explore aspects of life that are not intensely personal or interpersonal. Examples of this type of play include playing house by making food or sweeping up. This is different to playing house with a deep interpersonal narrative emerging. Other examples include answering the phone, driving a bus, doing the dishes and engaging in interesting tasks that are an everyday part of life. This is the first type of imagination based play and occurs before dramatic, socio-dramatic, fantasy or imaginary play. It is developmentally aligned with the advent of symbolic play. A very small child will pick up a toy phone (or a shoe) put it to his or her ear and say 'hello'.

### **3.2 Symbolic play**

Symbolic play is where a child engages in symbolic representation (Vygotsky, 1976) whereby they represent a crucial element of their play with an available object. An example of this is using a stick to represent a horse or using a rolled up blanket as a baby. This allows the child to be in control. In symbolic play children experience the concept and gain increased understanding without feeling out of their depth as they may do if caring for a real baby or riding a real horse. Symbolic play can occur within all imagination based play and often features within each of the types with the possible exception of rough and tumble play.

### **3.3 Dramatic play**

Dramatic play is play where the children play out something they have heard about or seen but haven't been directly involved in. If it was themed on something deeply personal, it would be socio-dramatic play. Dramatic play is where the child noticed or was introduced to a concept which they wish to explore. Things which have been seen on television or heard on the radio news are explored in this space. Seeing things within one's own community can also trigger dramatic play. For example, a child who sees a funeral procession will want to play with the idea of death in order to explore their feelings around it and understand it as a concept. A bereaved child will do this through socio-dramatic play where the experience is more intensely personal and incorporates deep emotional processing as well as the cognitive integration of new concepts.

### **3.4 Socio-dramatic play**

Socio-dramatic play is where children emotionally process real life events. These can be things that have happened to them or that they think might happen. This is an intensely personal type of play and each player brings their own emotional agenda to the play. In this way a collaborative narrative is constructed by the players. The contents of this narrative can be socially based for some players with their agenda being around things like parenting and friendship. For other players, more emotional experiences can be played out in this space; content such as rowing, fighting, family separation, bereavement, birth, moving house or going to hospital are common themes within socio-dramatic play. It is a very valuable type of play as it supports children to understand their world and process their experiences and emotions. They also use it to role play possible responses and measure how potential actions may be received. In addition, as a collaborative type of play, the narrative is co-constructed by the children and is therefore also a creative process. This creativity involves deep thinking and social skills including communication, negotiation and the merging of multiple content into a cohesive narrative.

### **3.5 Fantasy play**

Fantasy play is often called pretend play. Everything the child longs to experience is played out within this space. It is a world of make believe. Within this type of play, children become cats and dogs, superheros and fire fighters, wizards, witches, pilots, dancers. They can fly, they can drive. They are masters of their own limitless ability. It is a space where possibility and wonder are explored, where freedom is engaged. A space where confidence grows and the child experiences being in total control. It is a very fulfilling emotional space. It brings joy and pleasure to the child and the developing brain learns these emotions like a habit. It supports self-esteem and self-regulation as well as incorporating social skills in the collaboration and communication required to develop the play into a narrative with other children.

### **3.6 Imaginative play**

Imaginative play can be dramatic, socio-dramatic or fantasy based. What differentiates it is the integration of symbolic representation and a discounting of the conformist rules, which regulate the physical world of adults. Within imaginative play, symbolic play is also present and integrated into the narrative of the play. However, imaginative play is more diverse as the rules simply do not apply. A player can be a car, a rock can be a baby, a horse that isn't there can be ridden, a dog that doesn't exist can be patted. This is one of the most powerful types of play for developing higher level thinking skills within children (Nicolopoulou, Barbosa de Sá, Ilgaz, & Brockmeyer, 2009; 2010). The symbolic representation builds mental flexibility and problem solving ability. At the same time, this type of play

is founded on the construction of a narrative. This is a highly creative process involving clear and deep thinking skills (Vygotsky, 1976).

### ***Physical play***

Physical play inclusive of locomotor play, rough and tumble play, and risky play made up the biggest section of play observed. 51% of all play observed fell into this category. These observations include children balancing, climbing, running, jumping, hopping, skipping, rolling, tumbling and swinging. This is good news for children's physical development. One notable footnote to this high percentage is the low levels of risk-taking observed within this physical play. The children were active and measured within their physical play, not necessarily pushing physical boundaries and challenging themselves.

#### **3.7 Locomotor play**

Locomotor play is play that is based on movement. This includes play such as chasing, climbing, running, jumping, swinging, crawling and rolling. It is hugely important within child development as it develops the cerebellum at the base of the brain (Koziol, Budding, & Chidekel, 2012). In addition, it supports children in the management of their energy levels and helps them to grow, develop strength, build physical competence and confidence and contributes to their ability to self-regulate.

#### **3.8 Rough and tumble play**

Rough and tumble play is play involving close body contact with other players. This can include rolling, tumbling, squeezing, tickling and other forms of touch based play. It is a process whereby children gauge their relative strength, discovering their physical flexibility and enjoy the exhilaration of display. Rough and tumble play does not involve pain or injury but can be very energetic. Neuroscientific research has linked rough and tumble play to the development of negotiation skills and interpersonal communication proficiencies (Lindsey & Colwell 2013).

#### **3.9 Risky play**

Risky play was initially called deep play by Hughes within the 2002 taxonomy. However, over the past fifteen years, it has gained recognition in the education and early childhood communities and evolved into being described as risky play. As such, risky play is the more contemporary term. It is a type of play that supports the child to encounter and overcome challenge. It includes the development of self-belief in the face of adversity, resilience building and problem solving confidence as well as physical competence and survival skills. Risk within play is hugely beneficial for children across multiple levels (Gillis & Jupp, 2016). Engaging primal forces such as earth, wind, fire and water within their play allows adds depth to the integral experience on the part of the children. When the risk element of this type of play involves primal forces such as water and fire, it transcends into recapitulative play. Unfortunately, recapitulative play was also not generally observed as part of this study, pointing perhaps to a deficit of opportunity or support within our community spaces for this deep and complicated form of play.

### ***Social and communication play***

Social and communication play was popular among the children observed and made up 27% of all play observed. Play choices included rhyming, singing, story-telling, poetry, jokes, benign teasing, negotiation, topical discussions and etiquette discussions. 97% of all social interactions were positive with high levels of smiling, laughing, sharing, helping, offering, supporting and active listening being observed.

#### **3.10 Social Play**

Social play is play which explores the social rules of the community and culture in which the children live. This type of play can integrate with other types of play. Within construction play for example, much social exploration is embedded within the discussions, negotiations, communication strategies and group dynamic positioning. Spontaneous child initiated sports and games with rules also fall into

this category and are a space where children explore direction and free will, group action for a common purpose and self-regulation.

### **3.11 Communication play**

Communication play is play in which children explore the power of communication and play with its diverse models and methods. They are building a better understanding of their language as a conduit to relationship. Communication play is play where words, nuances and gestures feature strongly. Examples include, words games and rhyming, speaking through gestures, speaking in humming, made up languages, speaking without vowels, swapping two letters so that speech is attempted where T's become P's and vice versa. The possibilities for children's communication play are endless.

#### ***Construction Play***

Construction is inherently creative. Within construction, children make and build, create, destroy and recreate. Construction made up 9% of the observations. Within these observations, children were actively examining and manipulating objects and building or digging to create structure to support their play. The mastery play that goes along with this was however very limited. This is perhaps not surprising as much of the play observed was in community and shared spaces; mastery play requires a high sense of belonging and even ownership on the part of the children before it is engaged with meaningfully.

### **3.12 Mastery play**

Mastery play is where a child or group of children take control of the physical environment and change it in accordance with the direction of their play. This can include digging holes, building dams and bridges, making cubbies or shelters and using props and equipment to create something new such as tying a rope onto a tree to enable a different style of climbing. This fits within many categorisations of play and is equally at home within the spheres of construction play, physical play and empowerment play.

### **3.13 Creative play**

Creative play is play which is centred on the act of creation. Art and craft experiences where the children are free to engage in a non-directed way with materials is an example of creative play. However, creativity is developed in any problem solving and exploratory thinking based activity. As such, construction play is often inherently creative. So too is play where the children co-construct a narrative within socio-dramatic, fantasy or imaginary play. Creative play is any play experience which facilitates the children to have a new response, to transform their ideas into actions, to explore and experiment and create new understandings. Creative play is a very cognitive type of play that supports children's developing mental flexibility and problem solving ability.

### **3.14 Exploratory play**

Exploratory play is play in which children explore objects and materials to gain a better understanding of physical resources and their properties. Within very young children, this includes mouthing objects, handling, throwing and banging them to assess their structure, texture, density, weight and volume (Soska, Adolph, & Johnson, 2010). This play supports the formation of brain patterns that support mathematical and scientific knowledge acquisition within later years (Kinzer, Gerhardt & Coca, 2016). As the child grows, exploratory play grows with them. Exploring materials and using them within their play is integrated with play throughout early childhood. Building with materials, creating art with materials and using objects symbolically within imagination based play are all examples of exploratory play; a form of play that synthesises within other types of play and becomes more and more integrated as the child grows.

### **3.15 Object play**

Object play is play where objects are utilised as resources for experiences. An example of object play is craft, where the children use glue, scissors, and crayons. Object play is also integrated into art where paintbrushes, cups and moulds are used. Object play is integrated across construction play where the object is engaged with in order to construct. The nature of the object is important. The objects that children use within their play is also incorporated into the developing brain patterns as new knowledge. As with exploratory play, the brain reads all objects for weight, size, texture, density and volume. This process supports the development of spatial skills and mathematical reasoning (Subrahmanyam et al., 2001; Vasta, Miller & Ellis, 2004).

#### ***Recapitulative play***

Recapitulative play was not observed. This deep and complicated play may require a deeper and more intimate knowledge of the children than a three minute naturalistic observation allows. Alternatively, this deficit may point to a lack of opportunity or support for this type of play within neighbourhood play spaces.

### **3.16 Recapitulative play**

Recapitulative play is where children explore the complexity of their humanity and culture. This type of play can occur within all other types of play. It facilitates the child to explore their race and origins, their heritage, culture, ancestry, the history of the country they live in and from which their ancestors originate. It integrates identity and self-concept. While it can occur within any type of play, it often incorporates songs, stories and conversation. Primal forces and the natural world can also be revealed within this type of play. Concepts such as light and darkness, fire and water and the seasons are explored. While the imagination based play found within dramatic, socio-dramatic, fantasy, pretend and imaginary play allows children to explore social norms, recapitulative play goes much deeper. It allows the children to explore the cultural and historical roots of social norms, the origins of rituals and the influence of natural and environmental forces on our collectively evolving humanity.

## **3. THE ROLE OF THE EDUCATOR IN SUPPORTING PLAY**

### **3.1 The role of the educator within imagination based play**

There are six types of play that get broadly brushed as imagination based play. These are: role play, symbolic play, dramatic play, socio-dramatic play, fantasy play and imaginary play. A play experience can centre on one of these dominantly with elements of others integrated. For educators it is helpful to think about how we can support these six types of play individually and then blend the support practices where we see the play itself blended within practice.

To support role play, the educator should afford time, resources and respect. Children need to be afforded time to play and educators who support play. They also need environments in which imagination based play is facilitated in order to progress beyond role play into more narrative based imaginary play.

The role of the educator within symbolic play includes the provision of loose and interpretable materials within the environment. It is also important that educators model symbolic play themselves. When an educator observes a child using objects symbolically, they should support the child's symbolic representation by valuing it and responding in a similar vein. If, for example, a child picks up a stone and holds it to their ear like a telephone, the educator could pick up another stone and say hello. In this way, the educator meets the child within the child-initiated symbolic play.

When dramatic play occurs, the educator can observe it and use their observations to plan further play activities and experiences that are in line with these emerging interests and extend the child's social and emotional understanding of life events. An example of this is opening a play card shop with the children where cards can be sent to suit all of life's events. The ensuing discussions can be sensitive and also require a degree of maturity and presence on the part of the educator.

The role of the educator within socio-dramatic play is twofold. Firstly the environment should be designed with plentiful invitations and opportunities for socio-dramatic play. Providing cubby houses, a home corner, baby dolls, shop supplies, medical supplies and real life dress ups are all important



environmental aspects of supporting this type of play. Secondly, this type of play offers insights into the inner emotional world of the child. Socio-dramatic play offers opportunities for observing and reflecting in order to build understanding of the child's perspective on issues. These reflections can be shared and cross-referenced with parents so that the child is supported.

The first task of the educator in supporting fantasy play is allowing enough time and space for it to deepen into play where the children co-construct a narrative (Stetsenko, & Ho, 2015). The provision of open and interpretable materials is also important. Pieces of material, wand sized sticks and a variety of interesting hats are always interesting additions to the dress up box. Carrying out observations during fantasy play in order to better understand the children can provide interesting insights into children's interests and desires. Where an educator feels comfortable joining the play and contributing to the co-construction of a narrative, they should do so as this role offers them the most opportunity to scaffold and extend without devaluing or interrupting the play.

Finally, the role of the educator within imaginary play is to join in. This type of play is mostly social in nature, involving multiple children in the co-construction of a narrative. They achieve this through engaged focus and concentration as well as through the use of language, interpersonal communication and negotiation skills. All players have a democratic opportunity to contribute to the evolving narrative and help to shape the play. With the educator in the role of a play participant, they too are afforded this opportunity. Each participant brings their own agenda to the shaping of the narrative and subsequently to the experience. The educator's agenda is treated with the same respect as each participant's agenda. The educator may choose what they wish to gain or contribute. They can use it as participatory observation to better understand the children; they can use it as an opportunity to build relationship and foster connection; they can also use it to scaffold curricular learning as it unfolds and to extend the children's collaborative thinking. This is a delicate process of engagement. To have any chance of success, the educator must join the play as an equal.

### **3.2 The role of the educator within object and exploratory and object play**

The educator can support exploratory play with the provision of treasure baskets and fiddle toys. Objects of interest and unusual textures within the available resources should be provided. Loose materials that can be mouthed but are large enough not to pose a choking threat can also be provided. Supporting this type of play means allowing it to happen. This can involve watching so that safety is prioritised. It can also involve washing items after they have been mouthed to minimise the spread of germs.

The role of the educator in object play start with the provision of authentic objects which have weight, density and volume in alignment. Natural materials are naturally authentic for this reason. Manufactured materials from synthetic substances often have their weight, density and volume elements out of synch. As such they require informed testing on the part of the educator before being incorporated into the environment. The aesthetics of objects should also be considered. The purchasing and provision of objects for the classroom is something which an educator should reflect on before acting on. This is especially important due to the role object play performs within mathematical skill development (Subrahmanyam et al., 2001; Vasta, Miller & Ellis, 2004).

### **3.3 The role of the educator within physical play such as rough and tumble, and locomotor play**

The educator can support rough and tumble play by discussing it with the children and identifying with them what the comfortable parameters of rough and tumble play are for the group collectively. In this way, boundaries can be established and owned by the children. The environment that the educator provides also plays an important role here. A key consideration is the provision of space in the outdoor area for the scale of physical movement needed within rough and tumble play. The educator should also reflect on their responses to rough and tumble play and seek to gain pedagogical insights into how they can work with the children to achieve a balance between the children instincts and theirs.

The role of the educator within locomotor play is centred on the creation of a rich outdoor learning environment within ample opportunity to engage in physical play. If this is a limited possibility within the confines of an existing environment, there are many options. The educator can apply for funding

to change this. They can liaise with their local Nature Play organisation to create partnerships of knowledge and resources that can benefit the wider school community. They can also join or create a forest or bush school program. Bush School programs evolved in Australia following inspiration from the European Forest School movement. In establishing a bush school program for their class, the educator should work in partnership with the school, children and families to develop a program of learning in a natural environment at a set time each week. Bush schools are becoming more and more popular in Australia as knowledge of the importance of nature pedagogy and locomotor play grows (Wynne & Gorman, 2015)

### **3.4 The role of the educator with communication and social play**

The role of the educator within communication play is to build communicative variety into their day, every day. One popular example of communication play is mime. The educator can encourage the children to try to communicate without words, to play mimed guessing games or charades. Educators can also tell jokes and support the children's jokes, encourage performances and dramas, singing, rhyming, whispering games, pointing and gesturing in place of speaking, debating and arguing. Modelling communication play can also help. Educators can introduce skipping games or games with word actions built into their structure.

The role of the educator within social play lies in joining the play and engaging in the discussions as they unfold. Supporting the choices of the children, even when they would have made a different choice is also important. Within social play, children need to design and redesign the narrative, building their own experience of what works and what doesn't.

### **3.5 The role of the educator within empowerment play; creative play, risky play and mastery play**

All play is empowering for children. However, the role of the educator in empowering children is exemplified within creative, risky and mastery play. To facilitate creative play, an educator needs to empower the children with time, space and freedom to explore. The educator needs to provide interesting and diverse materials and allow freedom of access to them. Creative play is about self-expression and problem solving. This is not present within educator directed and managed craft activities. Creative play also offers the educator key opportunities for self-reflection on their level of comfort with the children taking control of the direction an activity takes. Sharing control with the children allows them to feel empowered and supports the educator's pedagogical development (Craft, 1999). Building this into a regular routine provides opportunities for growth to both the children and their educator.

The role of the educator within risky play dovetails very well into their role within locomotor play. The educator should provide a challenging natural environment that facilitates both. Fear can stop an educator from engaging their role within the provision for risky play. As such, the role of the educator here is also about self-education and reflective practice. Much literature is available on the benefits of risky play (Cevher-Kalburan, 2015). An early childhood educator has a duty of care to the child and an equal duty to provide quality and holistic play opportunities. The later includes provision for risky play. As such, risky play is a concept which requires reading, reflection and appropriate action.

The role of the educator within mastery play is to empower the children within the environment and support their sense of belonging and collective ownership. To engage in this type of play, the children have to have a sense of belonging within the environment; a sense that it is their environment and therefore a space which they are empowered to adapt and master.

## **4 CONCLUSION**

Play has long been valued in early childhood education and care (ECEC) (defined as contexts catering for children from birth to 8 years of age) and the importance of play to young children's healthy development and learning is well documented and well researched. Play research covers a vast domain. Philosophers, theorists, psychologists and educators have been researching the topic of play and its value for centuries. While there is a shared consensus that play has a positive effect on children's overall development and learning, play has proved to be extremely difficult to define. In this

paper, we have presented play through the theoretical lens of Hughes (2002) Taxonomy of Play Types and presented data on how children are making choices within their neighbourhood across these 16 types of play. We have discussed these findings by situating them within the taxonomy and concentrating on the implications for educators. Our aim within this process has been to illuminate what it means to provide for play-based learning.

It is also important to note that play does not stay neatly encapsulated within these different compartments. However, knowing and watching for the broad types can help educators to understand how children play and what their play looks like. Categorisations also help educators to understand the play of children and consider whether they are providing adequate opportunity and materials for all of the types of play. Integrating this knowledge into practice requires educators to view children as competent social learners, capable of taking initiative, making choices and being agents of their play and learning.

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## REFERENCES

- [1] Central Statistics Office (2012). The Haase-Pratschke Index of relative affluence and deprivation [online], available: <http://www.cso.ie/en/media/csoie/surveysandmethodologies/documents/pdfdocs/Haase,Pratschk,Report,on,Optimising,the,Sampling,Methodology,for,CSO,Household,Surveys.pdf>
- [2] Cevher-Kalburan, N. (2015). Developing pre-service teachers' understanding of children's risky play, *Journal of Adventure Education and Outdoor Learning*, 15(3), 239-260.
- [3] Craft, A. (2005). *Creativity in schools: Tensions and dilemmas*. Oxon: Routledge.
- [4] Department of Social Protection (2011). The children first: National guidance for the protection and welfare of children policy [online], available: <http://www.welfare.ie/en/Pages/Children-First.aspx>
- [5] Fine, G., & Sandstrom, K. (1988). *Knowing children: Participant observation with minors*. Qualitative Research Methods: Volume 15, London: Sage.
- [6] Geller, E., Russ N. & Altomari, M. (1986). Naturalistic observations of beer drinking among college students, *Journal of Applied Behaviour Analysis*, 19(4) 391-399.
- [7] Gillis, K., & Jupp, O. (2016). In praise of risky play. *Physical & Health Education Journal*, 81(3), 1.
- [8] Government of Ireland (2003). Data Protection Act [online], available: <http://www.irishstatutebook.ie/2003/en/act/pub/0006/sec0001.html>
- [9] Hill, M. (1997). Participatory research with children, Research Review, *Child and Family Social Work*, (2), 171-83.
- [10] Hughes, B. (2002). A playworker's taxonomy of play types, (2<sup>nd</sup> ed.). London: Playlink.
- [11] Kinzer, C., Gerhardt, K., & Coca, N. (2016). Building a case for blocks as kindergarten mathematics learning tools. *Early Childhood Education Journal*, 44(4), 389-402. doi:10.1007/s10643-015-0717-2
- [12] Koziol, L. F., Budding, D. E., & Chidekel, D. (2012). From movement to thought: Executive function, embodied cognition, and the cerebellum. *The Cerebellum*, 11(2), 505-525. doi:10.1007/s12311-011-0321-y

- [13]Lindsey, E. W., & Colwell, M. J. (2013). Pretend and physical play: Links to preschoolers' affective social competence. *Merrill-Palmer Quarterly*, 59(3), 330-360. doi:10.1353/mpq.2013.0015
- [14]Loucopoulos, P., & Karakostas, V. (1995). *System requirements engineering*. McGraw Hill International.
- [15]Nicolopoulou, A., Barbosa de Sá, A., Ilgaz, H., & Brockmeyer, C. (2009; 2010). Using the transformative power of play to educate hearts and minds: From vygotsky to vivian paley and beyond. *Mind, Culture, and Activity*, 17(1), 42-58. doi:10.1080/10749030903312512
- [16]Northern Ireland Statistics and Research Agency (2010). The Northern Ireland Multiple Deprivation Measure [online], available: <http://www.ninis2.nisra.gov.uk/public/Theme.aspx?themeNumber=137&themeName=Deprivation>
- [17]Punch, S. (2002). Research with children: The same or different from research with adults? *Childhood*, 9 (3) 321-34.
- [18]Robson, C. (2011). *Real world research*, (3<sup>rd</sup> ed.). West Sussex: Wiley.
- [19]Soska, K. C., Adolph, K. E., & Johnson, S. P. (2010). Systems in development: Motor skill acquisition facilitates three-dimensional object completion. *Developmental Psychology*, 46, 129-138.
- [20]Stetsenko, A., & Ho, P. G. (2015). The serious joy and the joyful work of play: Children becoming agentive actors in co-authoring themselves and their world through play. *International Journal of Early Childhood*, 47(2), 221-234. doi:10.1007/s13158-015-0141-1
- [21] Subrahmanyam, K., Greenfield, P., Kraut, R., & Gross, E. (2001). The impact of computer use on children's and adolescents' development. *Journal of Applied Developmental Psychology*, 22(1), 7-30. doi:10.1016/S0193-3973(00)00063-0
- [22]United Nations (2010). The UN Convention on the Rights of the Child [online], available: <http://www.childrensrights.ie/sites/default/files/UNCRCEnglish.pdf>
- [23]Vasta, R., Miller, S. A., & Ellis, S. (2004). *Child psychology* (4<sup>th</sup> ed.). Hoboken, NJ: John Wiley and Sons.
- [24]Vygotsky, L.S. (1976). Play and its role in the mental development of the child. *Soviet Psychology*, 5, 6-18.
- [25]Wynne, S., & Gorman, R. (2015). *Nature pedagogy*. Perth, WA: Association of Independent Schools of Western Australia.