



# Designing for Children

- With focus on 'Play + Learn'

## Character based Learning through Allegories of Information

An Investigation into the Use of Drawing as a Collaborative and Investigative tool for Exploring Concepts and Knowledge in Primary School Age Children- A Case Study.

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**Abstract:** *'Characters in Search of Science'* was an action research project piloted by Desdemona McCannon in 2007 and since successfully adapted to other teaching scenarios involving primary school age children (age 5-11). The idea behind this set of projects is that the personification of concepts enables children to locate ideas spatially, and create visualized dialogues testing ideas. It is accessible, gives the child 'ownership' of the information. It is also collaborative, confidence building and fun. It has proved to be a teaching methodology ideally suited to presenting complex or difficult ideas to children, especially those who struggle with conventional literacy.

**Key words:** *Embodiment, Visual thinking, Icons, Pictograms, Visual metaphor, Character, Anthropomorphism, Drawing, Concepts, Narrative, Information, Understanding, Play, Collaboration, Negotiation, Creativity, Communication.*

### 1. Introduction

The project involves a series of workshops in which children were asked to generate the content for communicating ideas using a defined field of knowledge. They were asked to outline their concepts using visual metaphor and drawing an anthropomorphic 'character'. They worked in small groups facilitated by students from NWSAD to storyboard narrative scenarios incorporating and adapting additional characters and information. They were asked to present their ideas to camera individually and in groups. They also developed their ideas individually in small comics. The children then made paper puppets from their character designs and worked with NWSAD students to create short animations.

The project has been exhibited at Wrexham Science Fair, and at Liverpool University, and the findings were disseminated at the First Global conference of Visual Literacy in Oxford, 2007. Since the project students studying for the MA in 'Illustration for Children' at NWSAD have adapted this methodology for use in further workshops in schools.

As a model that blends drawing and play into areas of the curriculum traditionally associated with text based factual information, this project has been proven to harness the enthusiasm and creativity of children. It is especially beneficial for children who find

writing and reading difficult, either because they are dyslexic, or because English is not their first language.

Children collaborated on the stories, adapted and drew each other's characters and also 'acted out' the information in the playground, imaginatively embodying and testing their powers. The project demonstrated the ease with which children could translate concepts and information into metaphor, adapting concrete objects into symbols and icons, and confidently transmitting these in drawings and verbal explanations. Writing was seen as a way of augmenting the image, rather than the traditional view of imagery 'illustrating' a text.

In my paper I will argue for the importance of raising the status of drawing in schools as a powerful alternative to text in helping children interpret and understand abstract or 'difficult' concepts. At present drawing in primary schools is often seen as an observational or craft based set of skills, rather than a problem solving dynamic learning tool. It will present the case for visual literacy as a core skill for the education of the global citizens of the future.

## 2. Allegories of Information

### 2.1 Drawing and Writing

Illustrators are often required to find appropriate visual metaphors to elucidate a piece of text, and tend to think of concepts in terms of other things. Quentin Blake writes that looking at John Vernon Lord's sketchbook doodles is like 'a sort of private visit to an alchemical workshop where base metal gets transmuted into visual commentary and metaphor.'<sup>1</sup> This scientific analogy is something I will return to later, as drawing as 'mental chemistry' has useful connotations for the type of study I am going to describe.



This is an image drawn by a five year old that embodies a number of problems I would like to put forward for discussion through this paper. The first is the idea that the goal of drawing and children's drawing in particular is not always to represent the outside world, but is an expressive, evolving visual language through which meaning is created about the drawer's relationship to the outside world.

In trying to map what I know empirically about the activity of drawing, from my own practice and observing children, onto prevalent rhetoric and discourses in the fields of cognitive science and theories of creativity within education I have become aware that the vocabularies that these tend to employ are not fully describing the nexus of motor and cognitive skills at play during the creation of a drawing. Drawing is not an isolated skill, drawing as it does from the various conditionings, skills and inherent abilities of the drawer. There is a synthesis of various 'states of mind' during the act of drawing, whether these are described as 'multiple intelligences' or 'key skills', Drawing is not simply a way of describing an idea but an enactment of it, engaging the creator in an emotional and physical activity as well as cognitive problem solving.

...If children are not drawing the shapes of the object as perceived from a fixed standpoint as some kind of 'picture' of the object, then what are they trying to draw? The answer seems to be that children are recording the event of their own processes of perception and thinking about the object in relation to the medium...drawing their own process of attention.<sup>2</sup>

Children's drawings are psycho-dramas in which the creative act of conjuring up symbolic narratives allows them to mentally 'act out' the anxiety that they are trying to express.

The second related theme of this paper is that the 'symbolic substitution' inherent in the way children play and create meanings from external objects, whether these are toys or culturally received signs and symbols is a key part of how they construct their identity. Within the field of 'imaginative' drawing personifying concepts allows an idea to be expressed in narrative form, as an allegory. Allegory as a narrative form enables concepts to exist within a symbolic landscape or 'thematic field' and interact in the context of the narrative through various dialogues with each other.

This is interesting to me in educational terms because it allows unfamiliar or 'difficult' concepts to be presented in a form that is universally known- the human body, however disguised a form this takes. It creates a forum with the capacity to generate suppositions and test them. By visualizing concepts in this way the whole premise, the scaffold of the 'story' can be held in the mind, and aspects of the discourse played out. It calls to mind the classical rhetorical technique of 'memory houses' which encouraged the use of metonymic and symbolic substitutions within a spatial metaphor such as a journey or a house as an aid to remembering sequences of an argument.

## 2.2 Character Design

If, as Winnicott asserts, the precursor of the mirror is the mother's face, our sense of our identity is deeply rooted in how we understand and read faces, our own and others. A face is the text we are most attuned to reading, and the grammar and vocabulary of emotion as expressed by a face are the child's first experience of the relationship between a signifier and its meaning. Babies only a few hours old gaze at patterns that resemble the human face in preference to others.

To put a face on something, in terms of graphical communication is to instantly make it interesting and memorable, hard-wired as we are to remember faces and fine tune the differences in the iconic configuration of eyes nose and mouth. Many contemporary artists working in the commercial field of illustration have become interested in the idea of 'character design' - more akin to logo design in the way they embody brand values, but with an emotional tug - catching the consumer's gaze. They perform the function of 'transitional objects', in Winnicott's phrase, and are invested with emotional qualities, have symbolic currency.

Character design is a contemporary graphical language. It functions as a thesaurus for the transmission of meaning beyond alphabetical syntax. Similar to the logic of the logo, character design operates through abstraction, metaphoric density and a play with visiotypes.<sup>3</sup>

This posits the idea that drawing and writing may not be distinct from one another - inherent in the term 'logo' is the assumption that a word can be a picture. The first writing was and is drawing, pictograms and hieroglyphs. Before children can read they understand that typography can be expressive, and through drawing letterforms words themselves can become personified, dramatized as agents of meaning as well as contextual signifiers.

The word 'Ruby' is written in a hand-drawn, sketchy style. Each letter has a small, simple face drawn inside it, giving the word a personified appearance. The 'R' has a face with a wide smile, the 'u' has a face with a neutral expression, the 'b' has a face with a neutral expression, and the 'y' has a face with a neutral expression.

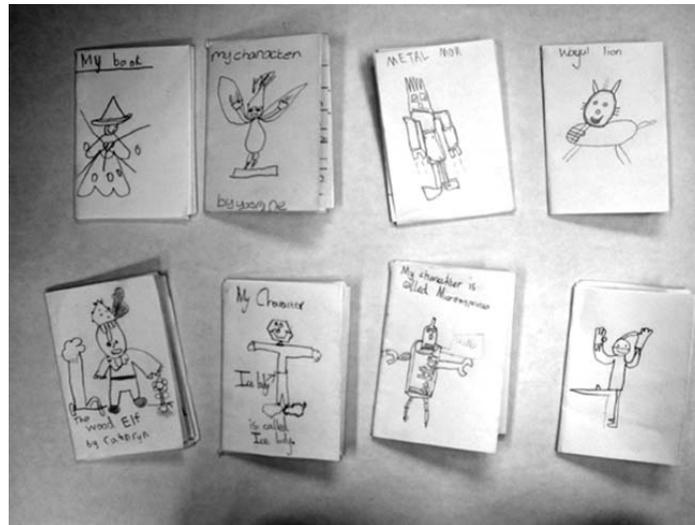
Writing and drawing, like speech and drawing are linked in the mind, and can be employed and read simultaneously, in a way that both enhances and interrogates the modality of each. Kanji is an example of this fusion - the concept and visual essence of an elephant graphically represented by a trunk and four legs, the compound of the character becomes visual shorthand, an icon and a word.

### 2.3 Characters in Search of Science

This was a pilot project undertaken in March 2007 to look at ways in which drawing could be used to creatively reinterpret factual content of the school curriculum. The focus was on children's visual literacy and creative thinking. In consultation with the art liaison teacher, it was decided that we would work with Key Stage 1, Year 2 children (age 6 and 7) and the science curriculum was identified as the area that we would take the information from. The children had been exploring the 'properties of materials' in the first half of the spring term, and already had a basis of knowledge to work from.

During the first session the children brainstormed ideas around adjectives such as 'waterproof', 'flexible', often responding anecdotally or with concrete items. They were then asked to act out the words. The children were then introduced the idea of an icon, and designed their own for these concepts. Again they were mainly couched in concrete,

metonymic terms although some children drew people acting out the concepts - transferring the kinesthetic experience of the lesson into their drawing.



The children were then asked to design a character with special powers based on one of the materials they had learnt about. Memorable creations were Plastic Attacker, who could fly due to being light and having a propeller, Metal Man, who was magnetic and had various tools for cutting with, Diamond Man, the strongest man in the world, who had multicoloured lasers and whose only weakness was if a whale sat on him... Wood Elf, Mr Rainsun, Mole Crusher, Spike Guy, Marshmallow Man, Ice Lady, Superfire Guy, to name but a few. They had to think about what the characters 'powers' were but also if they had a weakness.

During the next session they were put into smaller groups and asked what would happen if their character met another. For instance ice lady met Mr Rainsun, Superfireguy met Marshmallow Man and Metal Man. The smaller the group the better it worked, the larger groups struggled with all the variables in the story. Personifying the characters allowed the children to be creative with the set of information they were interpreting. It also demonstrated the efficacy of creating narratives as a way of remembering and sharing information. When the children were asked to storyboard what happened when their character met another, the variables of water on metal, fire on water etc were 'played out' as allegory. We found that the children had no difficulty assuming that their characters existed in the same fictional 'world' perhaps because they appreciated that they were based around the same thematic 'field'. The children also showed that they had a strong sense of cause and effect, the grammar of storytelling and enjoyed establishing the 'rules' for the stories, in the way that they would negotiate a game in the playground. In fact we found that they continued to play 'in character' outside, acting 'in character' to demonstrate their powers to each other and creating cause and effect games all of which was reinforcing their knowledge of the 'properties' performing allegorical 'experiments' with what their knowledge.

They then made paper puppets of their character, using a variety of media, and were shown how to make a wire armature to allow the puppet to be manipulated. Animation students from NWSAD worked with the children to produce short animations using stop frame animation. The children grappled with the spatial relationships and mathematical and geometrical problems associated with making a working paper armature. These puppets were more 'finished' pieces of artwork than the working drawings had been. The children held on to their puppets at all times in the classroom, and played with them as if they were toys. When it came to assembling the animation, the children's sense of their 'story' was a little stale, and the practicalities of stop frame animation meant that the animations did not reflect the initial narrative. They did act as a focal objective, a valuable outcome to the process of designing and refining their ideas.

We found that the children easily understood the concept of an icon and could devise their own system of signs to represent ideas. These were metonymic in nature - for example an umbrella to represent 'waterproof'. The task was more complicated at the next stage, personifying the properties of a material such as metal or wood. When devising a character to represent the properties of their chosen material they had to incorporate more information, and also had the freedom to interpret their character's personality. The task required a synthesis of conceptual and imaginative thinking.

We found that the children were enthusiastic about each other's characters as well as their own, and would happily draw stories containing each other's characters and imagine different narrative scenarios taking into account the set parameters of each characters 'powers'.

Characters were used in stories that displayed an intelligent concern for others, and were used as ciphers for anxieties in their interpersonal relationships. Some pupils find writing problematic and drawing much easier as a way of telling the story. Using the booklet as a prop the child can fluently describe their ideas for their character's 'powers' and share his ideas with others.

## **6. Conclusions**

Drawing that is not centered exclusively on representations of objects allows children to create information by developing a visual language particular to them, which can be used to share ideas and empathize with each other's point of view through play. Drawing shows itself to be a natural and investigative tool for defining information in many different ways.

Creating a character gave the children an emotional investment in their drawing, and through imaginative play they investigated 'becoming' the information, creating psychologically intense interpersonal narratives that were based around what they knew of their 'powers'. The 'symbolic substitutions' negotiated within a field of knowledge, in this case the 'properties of materials' a part of the ks1 science curriculum, allows the child a way to forge a personal understanding of, and perhaps emotional empathy with, the concepts in hand.

The concept is understood in terms the child has created, using the culturally transcendent elements of the human body. Borrowing characteristics from the popular

idiom of cartoons in the form of a 'superhero' allows the child to create an alter-ego which can enact problems and test the boundaries of what he or she knows within a particular field of information, and to explore beyond it. The characters enable the children to see concepts as moveable and put them into different contexts to create their own propositions and solutions.

The idea that creativity and art based activities are useful in primary education solely because they enhances literacy and linguistic ability too seems to me to be too simplistic an interpretation of the processes involved in drawing. If children can create their own icons and taxonomies of information, in allegorical form, they are processing complex information and communicating it to each other experimenting and testing their ideas as Blake described John Lord's sketchbooks - an '*alchemical workshop where base metal gets transmuted into visual commentary and metaphor.*'<sup>4</sup>

## Notes

<sup>1</sup> JV Lord, *Drawing upon Drawing*, Brighton, University of Brighton Press, 2007, p. 9.

<sup>2</sup> J Matthews, *The Art of Childhood and Adolescence: The Construction of Meaning*, London, Routledge, London, 1999, p. 21.

<sup>3</sup> P Thaler, *Pictoplasma: The Character Encyclopaedia*, Berlin, Pictoplasma Publishing, 2006, p. 3.

<sup>4</sup> Lord, op. cit., p. 9.

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