

NP³ Exploratory Study 8

Gillen with Twining, Hempel-Jorgensen, Henry, Murphy, Harrison, Passey, Kucirkova, Dawadi, De Geest & Fletcher-Campbell (2016) NP3 Exploratory Study 8. Milton Keynes: The Open University.

What is NP³

New Purposes – New Practices – New Pedagogy (NP³) is a collaboration between The Open University, Lancaster University and Manchester Metropolitan University, led by Professor Peter Twining.

NP³ is finding out about how children's digital practices influence teaching and learning. NP³ aims to find out about how children use digital devices outside school and what influence (if any) these practices have on what pupils and teachers do inside primary schools. The focus is on pedagogy across the curriculum (rather than the teaching of computing).

Our Research Questions (RQs) for these exploratory studies are:

RQ1 What are the digital practices that pupils bring to their learning in school?

RQ2 Across subject domains what do teachers' intended and enacted pedagogic practices indicate about their awareness of and the value accorded to pupils' digital competencies, and how do pupils' experience these pedagogic practices?

RQ3 What institutional circumstances and practices enable or undermine how pupils' digital competencies and practices are recognised (RQ1) and integrated into teachers' practice (RQ2)?

This brief report provides **a snapshot** of the digital practices evident in one of the 10 Exploratory Studies that we conducted between October 2015 and March 2016, with a summary of emerging findings from this Exploratory Study.

For further details about NP³ go to <http://www.np3.org.uk>.

Exploratory Study Overview

This is a small Community Foundation school, part of a charitable trust, in an urban/suburban area of Northern England. It caters for children from nursery to Year 6 and has a higher than average number of children on Free School Meals and with Special Educational Needs, and a lower than average proportion of children with English as a Second Language; this is increasing in the younger groups. A small proportion of children come from relatively affluent households. The study took place across the whole school; detailed observations focussed on Early Years and Year 5.

Emerging findings

Evidence bears out the Head's commitment to leading a "proactive school which has really engaged with ICT, computing and digital technology." Examples of practice include:

- Working hard to enable all pupils to be "digitally literate and safe", involving ICT in diverse teaching and learning activities with pupils of all abilities;
- Using the school blog and Twitter accounts to celebrate children's work and activities, and to connect to families and educational professionals;
- Weaving ICT into all aspects of school life including a strong emphasis on observation and recording children's achievements in detail and planning.
- Pedagogy and assessment methods are evolving supported by perceived improvements in technologies; especially with the move away from an ICT suite to greater use of netbooks and tablets.

Students demonstrate understandings that digital technologies can support their learning across spaces, both within school, especially through the use of netbooks and tablets, and also through their school learning platform, school blog, email, My Maths accounts etc.

Pupils' digital practices outside school

An overview of digital practices by pupils outside school was provided by a range of evidence:

- A) A few children and parents contributed to a digital log exercise, in which engagements with technology were recorded in various ways. This demonstrated a range of access to technology including diverse provision spanning tablets, laptops, PCs, smartphones, console devices, etc. An example of a very proficient use of coding was a child who had built her own website; carefully supported by her family with excellent technical knowledge and understanding of esafety (see below). Some children have access to technologies where games can be played but the opportunities for digital creation are relatively limited. Transmedia and alternate reality play e.g. Lego and Skylanders were mentioned. Some have a relatively limited range of access to ICT.
- B) A focus group with children in Year 5 mentioned considerable and detailed knowledge of platforms, hardware and software. The school's coding club was one focus of activity as was engagement with Minecraft.
- C) The school demonstrated awareness that pupils' access to and proficiency with digital technologies varied. For example a teacher had tried setting homework on My Maths, a software programme, but discovered that many pupils did not have access to a PC or laptop at home.
- D) Teachers displayed nuanced understandings of digital practices outside school. For example an Early Years teacher who had made home visits, offered sophisticated interpretations of occasions when children are mesmerised by a large screen presentation, but do not necessarily comprehend much of the content, and contrasted such activities with those that involve learning in various ways, for example where dialogue prompts more thoughtful engagement.
- E) Some parents engaged with the school via social media e.g. comments on blogs that included observations on their children's uses of digital practices.
- F) Some parents demonstrated a keen attention to their children's digital literacy practices. For example this parent of a 3 year old: 'Even down to the Sky TV, she knows how to rewind and fast-forward and go in the planner and find a program that she likes.....Yeah, she looks for 'D' for Dora, she stands close to the screen and goes "there's a 'd'" and then she says "is this Dora Mummy?" and I say yes this is Dora. And then she says, "I'll press play, it's the triangle" so she knows it's the triangle.'

At home after school this girl chooses to use her desktop PC to program in Scratch. She uses simple programming to create basic animations and games. She uses her (wireless) keyboard and (wired) mouse. The household has its own server built by her father. Their mother explains, "they are both going to have computers in their bedrooms, but only because I know my husband has the skills to completely lock down that computer, so they can only get to very specific websites, and they are only allowed totally approved games or whatever, and if they (the children) use their computer when they're not supposed to then that can lead to it being taken away, so it's very strict rules with it and that's the only reason they're allowed in the bedroom."



In School

School Context

The school is committed to maximising achievements, understanding learning to be founded in high quality communications and wellbeing, and an environment facilitative of learning. Therefore great attention is paid to the quality of relationships between children, peers and adults so that highly engaged, positive learning interactions are fostered. Creativity in teaching is strongly emphasised so that children's imaginations are activated and their learning developed through educational dialogues. The school is committed to research and intends to become increasingly research-based; this includes building relationships with other schools and educational institutions.

The school is developing its own assessment tool: Startracker, which is integrated with their observations, monitoring of individual progress and target-setting processes. This was stimulated in part by policy changes and curriculum changes with higher demands, the abandonment of centrally set "levels" and also the school's proactive desire to maximise the effectiveness of observations and monitoring through systematic data collection and analysis.

A current specific target is to improve standards in writing; this is supported by various activities including drama and art-based work. There is great attention paid to physical aspects of the environment, inside and outside, including through commitment to arts, crafts, and holistic activities such as keeping chickens and gardening. These are also mined for pedagogic opportunities and to enhance learning dialogues.

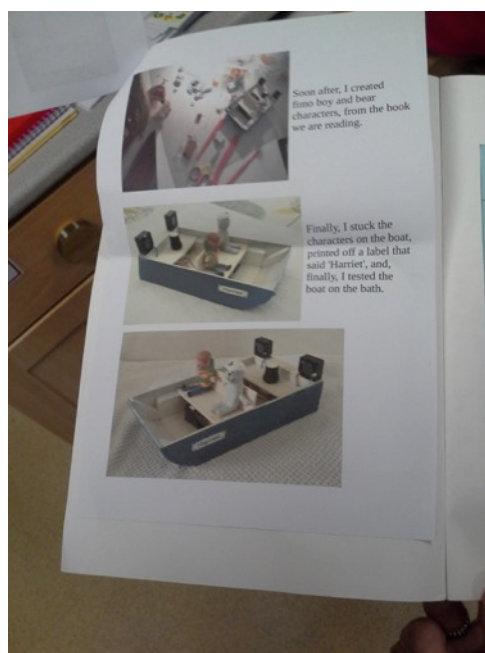
Vision and digital spaces

Observations of classroom practice revealed confident use of diverse digital technologies in the classroom by teachers, including Interactive Whiteboards (IWBs), TVs, touchscreens, tablets, and other tools; all geared towards learning objectives that were clearly understood and shared by teachers and other adults, and communicated explicitly to children. Strong endeavours are made to communicate activities to caregivers, including through the use of digital communications across school/home boundaries as well as in face-to-face meetings.

iPads are used within the curriculum in many different ways including using apps and games (e.g. Minecraft, Angry Birds and grammar games) to develop creative ways to teach and inspire children, as well as to enhance English and Maths skills. They are used in assessment including in PE and drama. Children are supported to develop independent, critical research skills and to engage appropriately with digital communication platforms such as the school blog.

Focus group children in Year 5 displayed a wide range of understanding of various ways of using ICT to support their learning including the use of specific sites to assist language learning, maths, English and researching specific information. All the children, even those who had very limited engagement with it themselves, displayed a strong knowledge of the value of coding, and spontaneously made connections between practices with digital technologies, everyday life and future employment possibilities and society more generally.

Homework is "open-ended" which means that there are no firm templates or worksheets, rather a task that can be interpreted in various ways, including through fluency across physical and digital artefacts. The picture on the right shows how a child has used digital photography and writing to document their progress in designing and building a "Harriet" boat. Once completed this work was then printed out to provide a portfolio alongside the finished object.



Example 1

An Early Years teacher working with a 4 year-old in a 1:1 observation used a pupil-led activity with a PC to find out that his competencies included:

- (1) knowledge of various elements of a PC including the mouse and the DVD drawer;
- (2) identifying some key features of a software programme appropriate to his capacities and actively engaging in creating a digital artefact;
- (3) understanding key routine features such as saving work, being prompted for a name entry and connecting to a printer.

The observation is closely tied to assessment and recording of his achievements including in literacy.

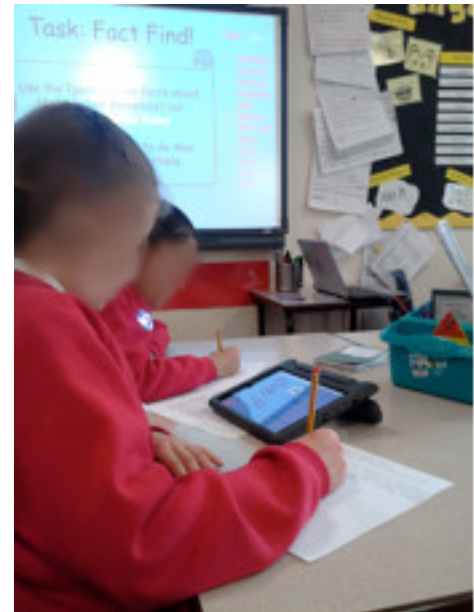


Example 2

In this Year 5/6 class the teacher structured an English session which was part of a sequence stemming from a book "The Highwayman". Continuities were established and maintained between earlier activities, the current task of researching and notetaking and the projected actual report writing. There was a balance between structure and some opportunities for pupils to follow their own specific detailed interests. The teacher demonstrated awareness of the pupils' proficiencies with using iPads, conducting independent research, and esafety.



The previous day the children had acted out a dramatic scene on this theme, an extract of which was played back to assist keying salient knowledge. The task then introduced was to write a factual report: first engaging in note taking from independent research from websites. The children worked in pairs, supported by a number of resources including a printed model of a good report, a "punctuation pyramid", "magpie note book", prompts on the IWB and occasional teacher whole class prompts including regarding "internet golden rules".



Two children collaborating on research and note-taking for their report. These girls succeeded in identifying an appropriate website and worked in a very absorbed fashion, carrying out the task effectively, demonstrating also their interest in the task.