

Digital Futures in Teacher Education

Open Resource c

Teachers and S

# Digital Futures:

## Learning and Teaching Literacy in the Digital Age

Jackie Marsh

University of Sheffield



Intro



Digital  
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Examples of Practice



The Story

# EU High Level Group of Experts on Literacy: Final Report (2012)

- **Young Children:** Children will be exposed to books and other printed and digital reading materials from their earliest days. (p90)
- **Primary School Years:** To meet the demands of the future, literacy provision will be reinvented in Europe. Literacy teaching in primary schools will be expanded to include the implications of digital literacy, including critical engagement with texts and their sources. This will provide a firm basis for developing 21st- century competences in an information society. (p91)
- **Adolescents:** Our vision is a Europe in which reading reconnects to adolescents' lives. The digital environment will be designed to engage teenagers in reading. (p92)

# Structure of Talk

- Digital literacy - the theory
- The characteristics of children's digital literacy practices in homes and communities
- Embedding these characteristics into classroom practice

# **DIGITAL LITERACY**

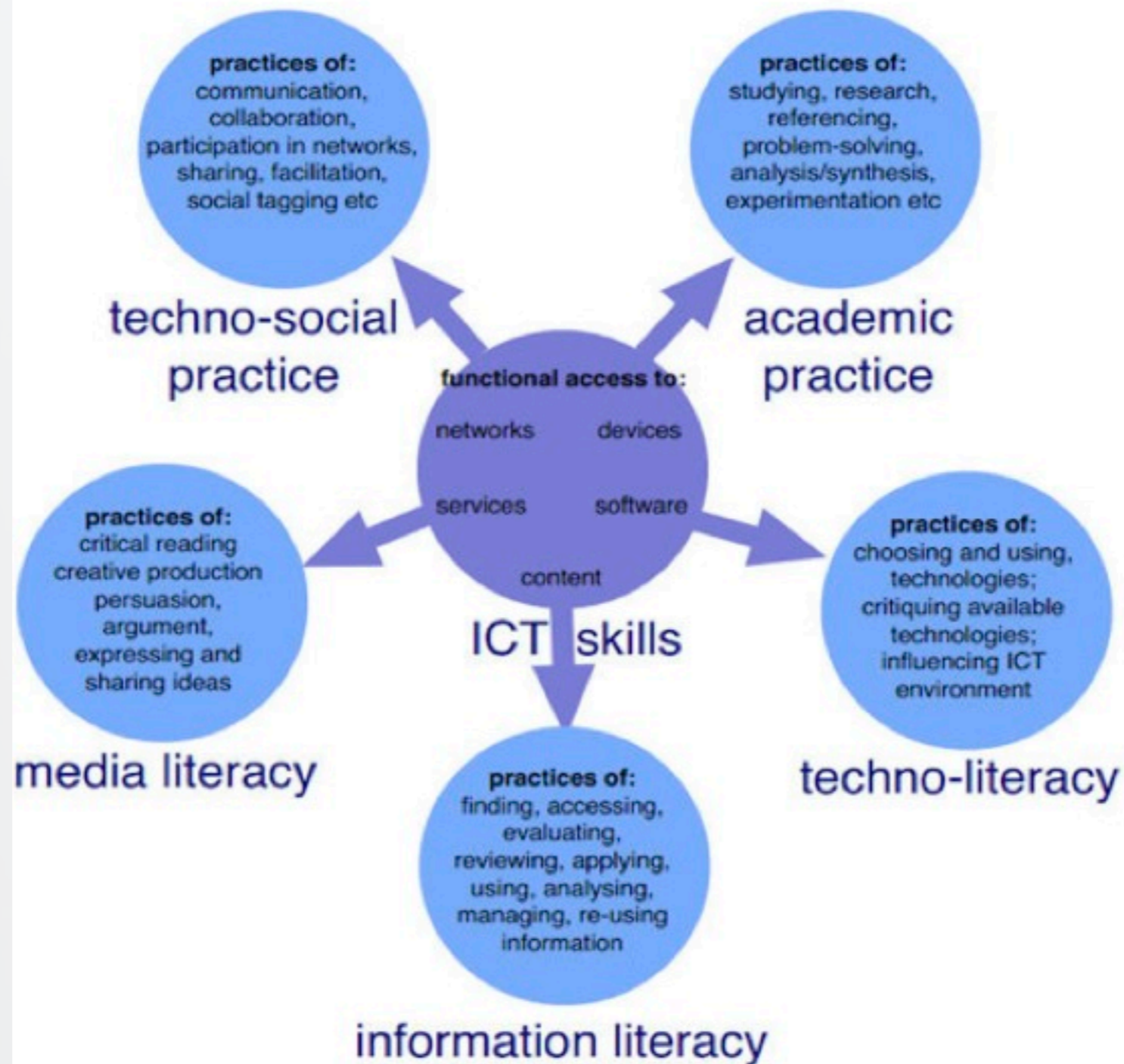
# Theoretical background

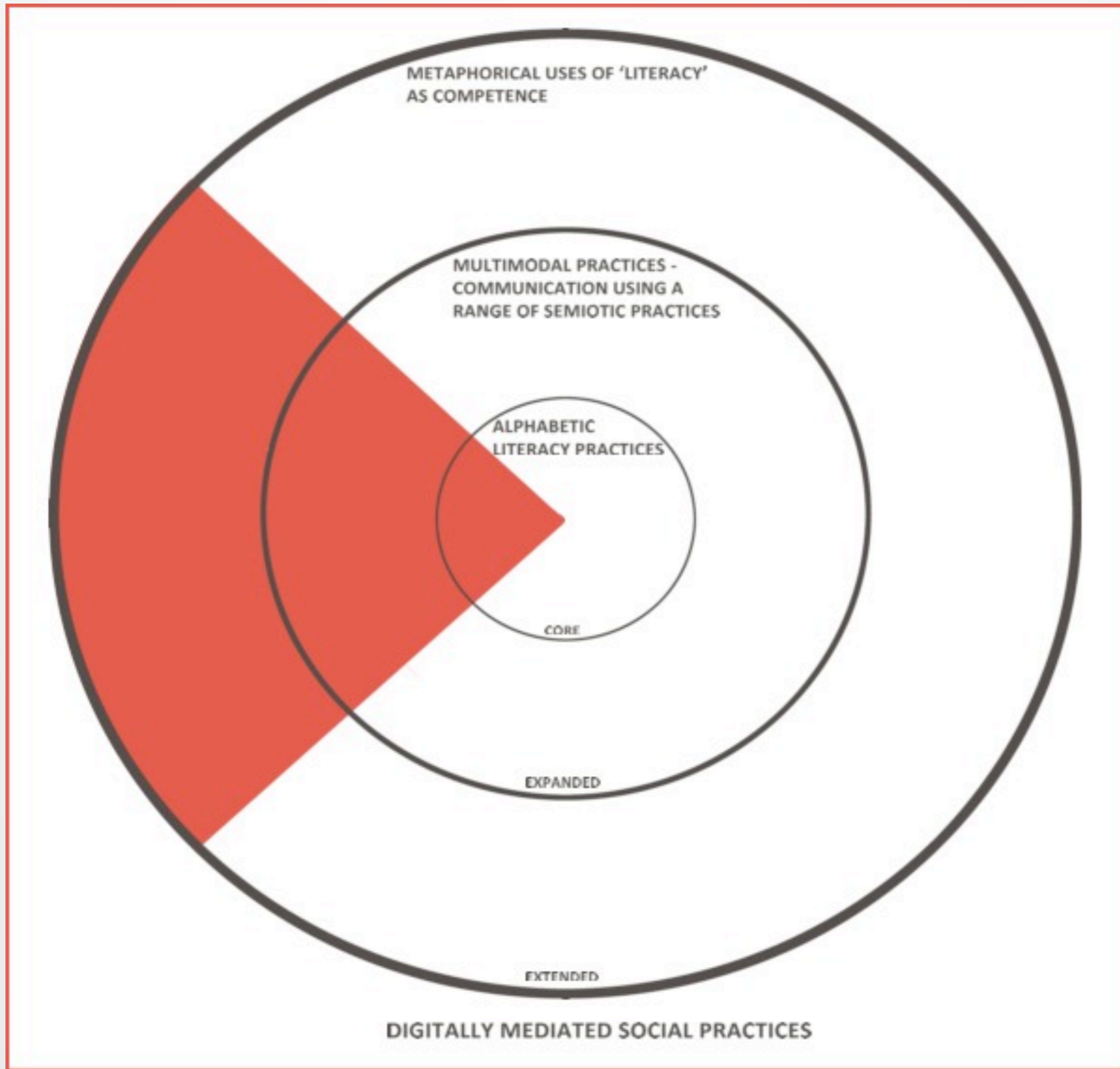
- New Literacy Studies (Street, 1995) - literacy as a social practice.
- Multimodality - written word only one element of complex texts, accessed across a range of media (Kress, 2010)
- New Literacies - both new practices/ skills (Leu et al., 2004) and new mindsets (Lankshear and Knobel, 2011)

# Digital Literacy

- Reading and writing that takes place through/ with/ in digital media (on screens - computers, tablets, iPads, smartphones, mobile phones, console games, handheld computers, electronic readers, projected texts on a range of environments)
- 'Reading' as a term includes decoding/ understanding/ analysing multimodal texts
- 'Writing' / 'Authoring' / 'Design' / 'Production' all variously used to describe creating texts using a range of modes
- 'Text' is an inclusive term - 'any instance of communication in any mode or any combination of modes' (Kress 2003: 48)

Digital literacy anatomised: access, skills and practices







# Key lines of enquiry

(e.g. Hull and Schultz, 2002;

Marsh et al., 2005; Moje, 2008;

Davidson, 2012)

Digital literacy  
in homes  
and communities

'Assimilation' (Labbo & McKenna, 2008)  
(e.g. Bearne and Marsh, 2009; c.f. reviews  
by Abrams and Merchant, 2013; BECTA,  
2010; Burnett, 2009; Labbo and Reinking,  
2003)

Digital literacy  
in classrooms

(e.g. Leander and Sheehy, 2004;

Bulfin, 2009)

'Accommodation' - (Labbo & McKenna, 2008)  
(e.g. Alvermann, 2006; Burnett, 2012;  
Davies & Merchant, 2009; Dwyer, 2013;  
Korkeamaki, 2010; Leu et al., 2004; Pahl  
and Rowsell, 2011; Walsh, 2010)

# Research questions

- What are the key characteristics of children's digital literacy practices in homes and communities?
- How can the characteristics of home uses of digital literacy be embedded effectively in classroom curriculum and pedagogy?

# Projects

- **Family Digital Literacy** [4 case studies; parental videos and diaries; semi-structured interviews]
- **Children's use of Virtual Worlds** [surveys of 175 children; 8 hours of video observations of 4 children over 1 month each; 26 group and individual semi-structured interviews]
- **Children's Games and Songs in the New Media Age** [2 year ethnographic study of play in 2 primary playgrounds (over 600 children); field notes and video observations; reflections on videos; survey of media use with 353 children; semi-structured interviews; diaries]
- **Childhoods and Play** [semi-structured interviews with 28 adults]
- **Digital Futures in Teacher Education** [over 250 children in 10 schools involved]



Mobile -  
crossing time/  
space

Embedded  
in the  
everyday

Passion-driven

Intergenerational

Online/ offline  
blurred

## Digital literacy practices in the home

Trans-modes/  
media

Glocal

Networked

Playful

Shaped by  
popular culture

**Modes: writing, signs and symbols, sound, moving image, still image**



## Trans-modes/ media



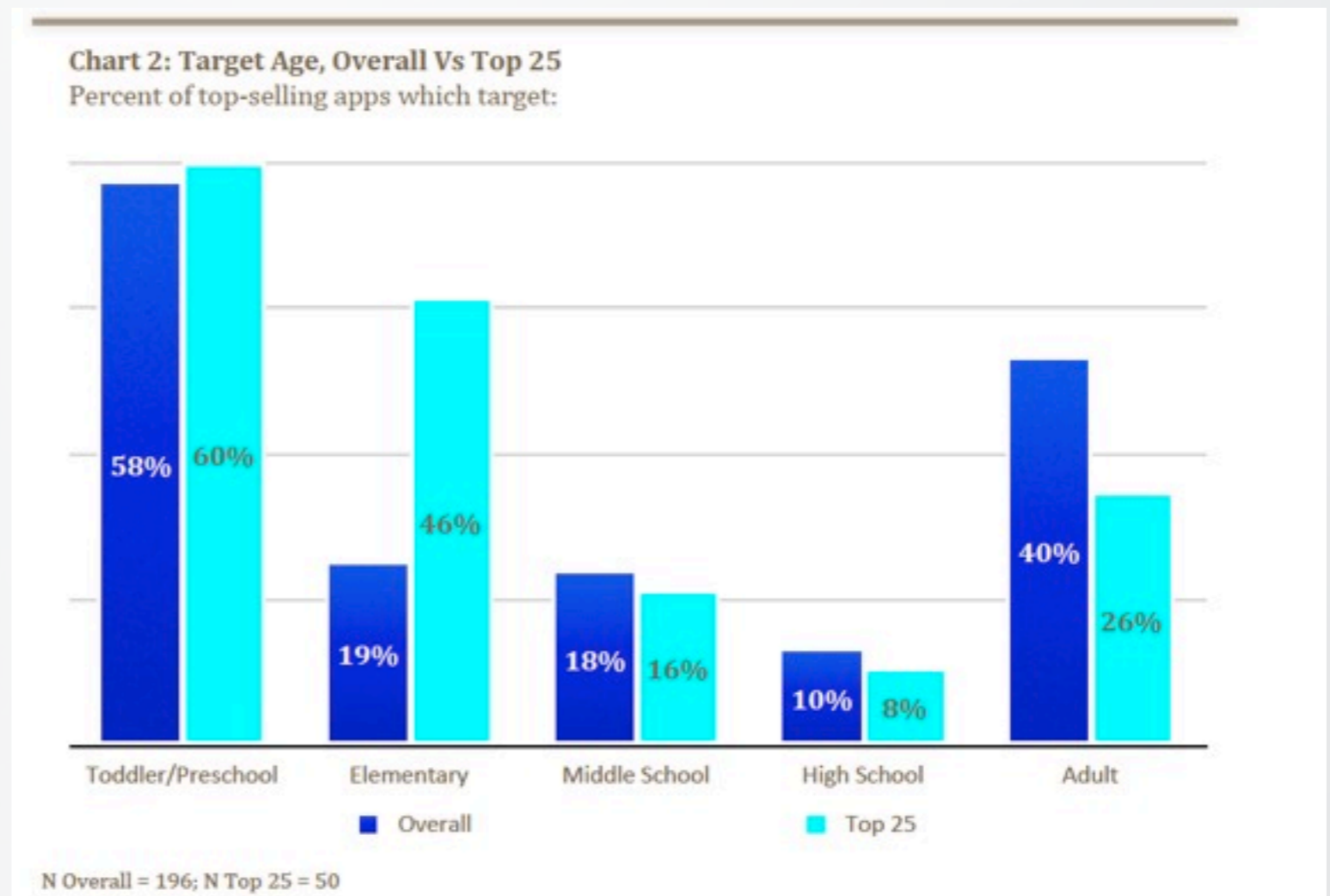
**Media: television, DVD, computer (PC and laptop), handheld computer, mobile phone, smartphone, tablet, iPad, screens on artefacts such as electronic toys, washing machines and other domestic items**



# Mobile Devices

52% of 0-8 year-olds in US had access to mobile device such as smartphone/ ipod or ipad; 38% of 0-8 year olds used them

(Common Sense Media, 2011)



# App Gap? (Common Sense Media, 2011)



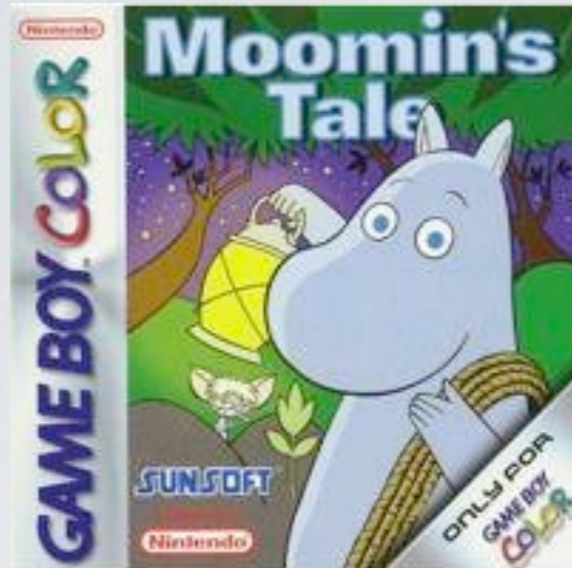
47% v 14%







# Media ecologies (Ito et al., 2006)



### Moomin Play

By Dohi Sweden

Open iTunes to buy and download apps.

[View More By This Developer](#)



#### Description

The world's first mobile Moomin digital toy for kids. Come and join the fantastic world of the Moomins digitally. Stories created by the legendary children's author Tove Jansson who have delighted generations. These magical toys will take you into the fantasy world of Moominvalley.

[Moomin Play Support](#)

[...More](#)

#### What's New in Version 1.1

Moomin Play has a new update, the "beachgame".

Moominmamma is down at the beach to collect shells and look for the lost treasure. Help her place the right shell

[...More](#)

[View In iTunes](#)

This app is designed for both iPhone and iPad

\$0.99

Category: Games

Updated: May 14, 2013

Version: 1.1

Size: 48.9 MB

Language: English

Seller: Dohi Sweden AB

#### Screenshots

iPhone | iPad



### Moomin Bubble

Från Spinfy

Öppna iTunes när du vill köpa och hämta appar.

[Visa mer från den här utvecklaren](#)



#### Beskrivning

The greatest bubble adventure is about to begin! Moominvalley is in danger: the bubbles are spreading over the whole valley. Help Moomin and Little My clear their way through bubbles!

[Support för Moomin Bubble](#)

[...Mer](#)

[View In iTunes](#)

Den här appen är utvecklad för både iPhone och iPad

7,00 kr

Kategori: Spel

Utgiven: 26 jun 2013

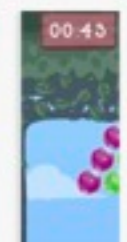
Version: 1.0.0

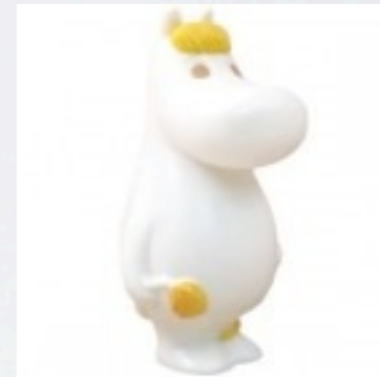
Storlek: 30.6 MB

Språk: Svenska

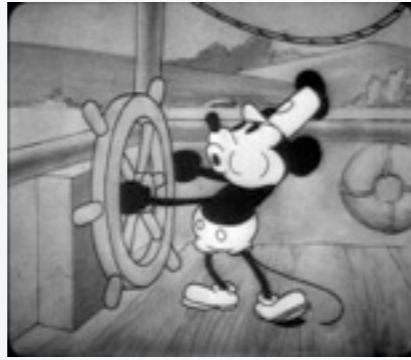
#### Skärmbilder

iPhone | iPad

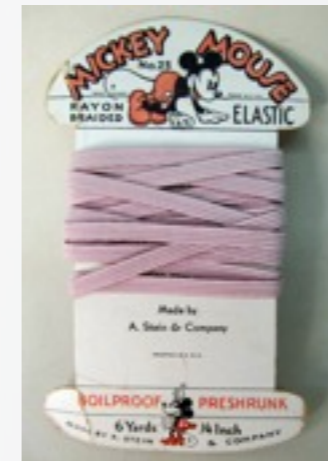




1928



1930s...



## Create your own Moomin comic!

The Moomins' comic machine offers hours of fun. So don't be square! Create a comic and share your story with other Moomin fans.



CREATE YOUR OWN COMIC

READ COMICS FROM THE GALLERY

### GALLERY

#### LATEST

SMELLY STINKY  
jemimajones  
LITTLE MY AND STINKY'S...  
mommin  
AMOREY SE BDAY  
p3081900

#### MOST POPULAR

LITTLE M 2  
zofia  
CHESKA  
terry.lang  
LITTLE MY IS NOUTE  
Alex

#### RANDOM

SNORKMAIDEN'S STROLL  
Mymbble.kt  
MAMMA MAKES PIE.  
MoominMamma  
UNTITLED  
kroszka



# facebook

Email or Phone

Password

Log In

Keep me logged in

[Forgot your password?](#)



**Moomin**  
is on Facebook.

To connect with Moomin, sign up for Facebook today.

Sign Up

Log In



**Moomin**

11,794 likes · 122 talking about this

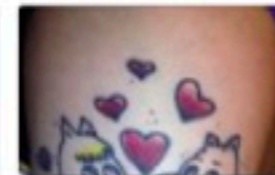
Like



Community

This is the Official Moomin Page on Facebook!

About



Photos

11,794

Likes

# New Media Assemblages

While an ecological framing looks to find a contributory role for all components, an assemblage has room for tension, mismatch and ongoing reconfiguration. There is not sense of creating and then maintaining a balanced symbiosis of parts. As a result of this heterogeneity and independence, assemblages dismantle and reassemble in different combinations as context and requirements shift.

(Carrington, in press)

# Trans-mode and media practices in homes

- Children engage with and create multimodal texts across a wide range of media
- Children participate in social networking in relation to new media assemblages
- Multimodal practices informed by other key characteristics e.g. playful, shaped by popular culture, networked



Mobile -  
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space

Embedded  
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Passion-driven

Intergenerational

Online/ offline  
blurred

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practices  
in the home**

Trans-modes/  
media

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Shaped by  
popular culture

**Online/ offline  
blurred**

Country	Population <sup>2</sup> (est. millions)	Internet (Broadband <sup>4</sup> ) Penetration (%)	Child Internet Use, by Age <sup>5</sup> 2008 (2005) <sup>6</sup> (%)				Parents' Internet Use, 2008 <sup>7</sup> (2005) (%)
			All	6-10	11-14	15-17	
EU 27	489.1	60.7 (31.6)	75 (70)	60	84	86	84 (66)
Austria (AT)	8.2	68.3 (32.8)	77 (66)	49	90	93	87 (76)
Belgium (BE)	10.4	67.3 (48.1)	71 (84)	58	75	80	92 (80)
Bulgaria (BG)	7.3	32.6 (10.0)	81 (41)	64	89	93	84 (34)
Cyprus (CY)	0.8	41.0 (12.6)	50 (44)	28	57	64	57 (35)
Czech Republic (CZ)	10.2	48.8 (16.5)	84 (78)	58	94	97	91 (73)
Denmark (DK)	5.5	80.4 (63.2)	93 (95)	83	98	99	98 (96)
Estonia (EE)	1.3	65.4 (36.8)	93 (90)	85	97	96	92 (83)
Finland (FI)	5.2	83.0 (53.3)	94 (89)	87	98	100	98 (96)
France (FR)	62.2	64.6 (30.3)	76 (78)	53	86	91	85 (67)
Germany (DE)	82.4	67.0 (33.5)	75 (65)	56	88	94	89 (75)
Greece (EL)	10.7	46.0 (3.90)	50 (39)	25	59	79	54 (24)
Hungary (HU)	10	52.5 (21.8)	88 (65)	68	95	95	80 (41)
Ireland (IE)	4.2	58.0 (13.9)	81 (61)	61	94	96	89 (60)
Italy (IT)	58.1	48.6 (16.4)	45 (52)	34	48	54	82 (62)
Latvia (LV)	2.2	59.0 (22.3)	83 (73)	59	92	99	87 (54)
Lithuania (LT)	3.6	59.0 (19.6)	86 (70)	69	94	96	83 (45)
Luxembourg (LU)	0.5	74.9 (44.1)	75 (88)	47	89	93	92 (87)
Malta (MT)	0.4	23.5 (20.6)	88 (68)	71	93	97	63 (41)
Netherlands (NL)	16.6	82.9 (65.6)	93 (92)	83	96	100	97 (97)
Poland (PL)	38.5	52.0 (21.6)	89 (62)	72	97	98	82 (44)
Portugal (PT)	10.7	39.8 (23.8)	68 (54)	54	81	75	65 (37)
Romania (RO)	22.2	33.4 (n / a)	70 (42)	57	72	82	58 (35)
Slovak Republic (SK)	5.5	49.6 (11.6)	78 (68)	55	87	86	76 (59)
Slovenia (SI)	2	64.8 (33.5)	88 (81)	73	95	96	84 (74)
Spain (ES)	40.5	66.8 (29.3)	70 (52)	52	86	79	72 (50)
Sweden (SE)	9	80.7 (50.8)	91 (86)	77	97	100	97 (98)
United Kingdom (UK)	60.9	70.9 (44.1)	91 (90)	87	94	95	92 (72)
<i>Other</i>							
Iceland (IS) <sup>8</sup>	0.3	90 (72.2)	94(93)	87	97	100	98(98)
Norway (NO) <sup>9</sup>	4.6	86 (57.3)	93	n/a	n/a	n/a	n/a(97)

**Table 1: Children and parents online by country**

# Virtual worlds for children

- Persistent space that offers a range of environments that are navigable through maps
- Customisable avatar
- Home for avatar
- Free chat and safe-chat servers
- Games which earn in-world currency, generally played individually
- In-world goods that can be purchased
- Moderators
- Information for parents on website





Reading postcards

Writing and reading  
public chat

Reading in-world  
texts e.g. newspapers/  
books/ catalogues

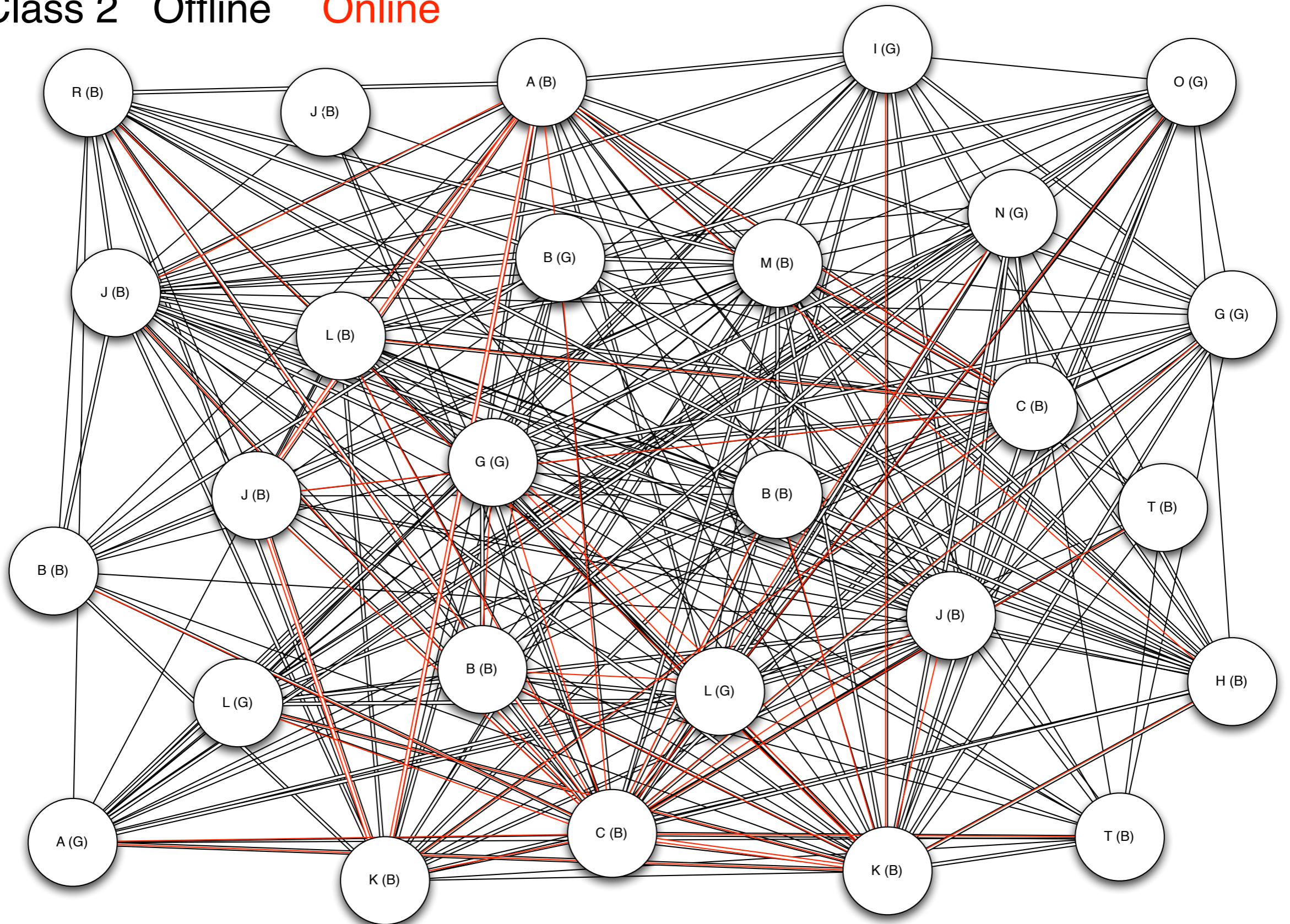
Reading game  
instructions

Reading in-world text  
e.g. signs,  
challenges posed by  
producers

Writing submissions  
to the in-world  
newspaper



Class 2 Offline Online



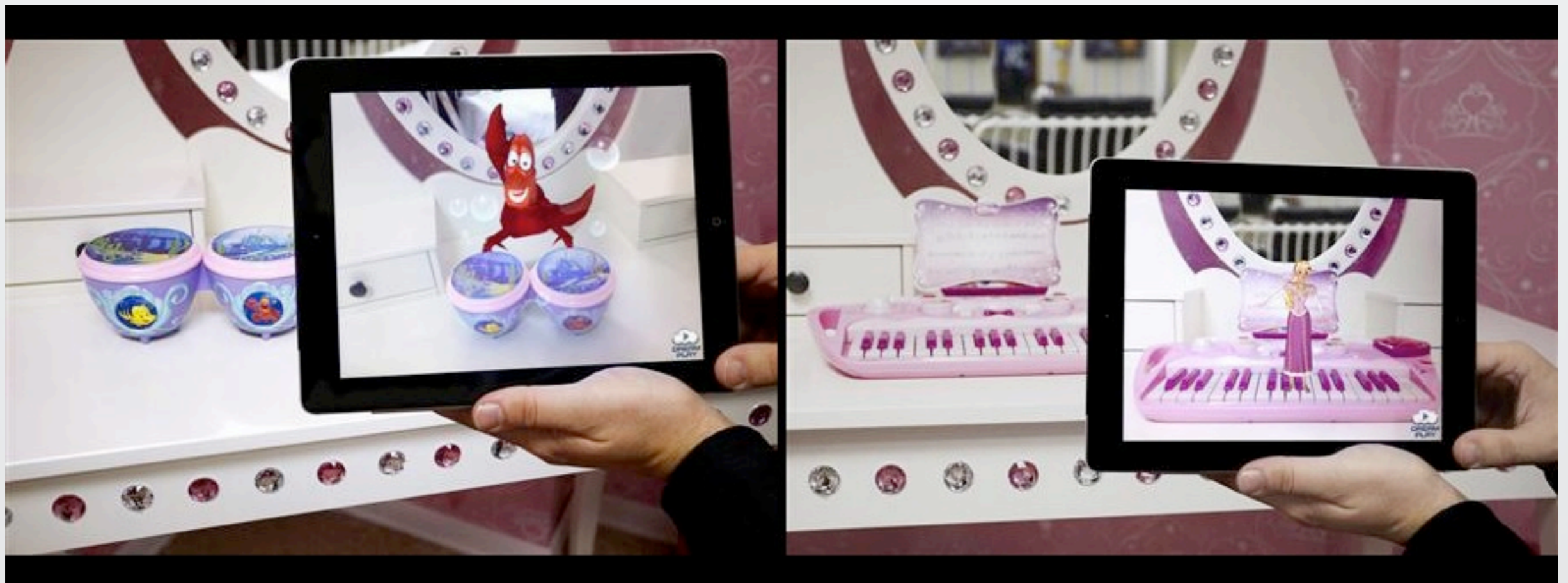
# Augmented reality



Apptivity - Hot Wheels



# Disney Dream Play



# Online/ offline practices in homes

- Purposes for reading similar across online and offline spaces
- Children engage in literacy practices online that relate to offline practices e.g. social networking with friends
- Offline public spaces increasingly related to online e.g. use of QR codes in toy shops, cinemas



**Shop now with your smart phone  
on this Disney Princess Virtual Store.**

Simply scan the QR code or download the FREE Disney Store app (it takes seconds!),  
to shop directly from this wall now and have any item delivered straight to your home!!  
Proudly brought to you by Disney and Target.







Mobile -  
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Passion-driven

Intergenerational

Online/ offline  
blurred

## Digital literacy practices in the home

Trans-modes/  
media

Glocal

Networked

Playful

Shaped by  
popular culture

# Intergenerational

# Intergenerational Digital Literacy Practices in Homes

- Communicating via email, texting, Facebook etc.
- Accessing the internet together on PCs, smartphones and tablets
- Sharing e-books
- Playing online/ tablet games together, or using Console games (e.g. Wii)



Mobile -  
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**Digitally enabled practices  
in engaged classrooms**

Trans-modes/  
media

Glocal

Networked

Playful

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popular culture



DIGITAL  
FUTURES  
IN TEACHER  
EDUCATION

**Sheffield  
Hallam  
University**



The  
University  
Of  
Sheffield.

## **Aims of project: To involve pre- and in-service teachers, teacher educators and pupils in:**

- Exploring and sharing the potential of digital technologies
- Understanding more about what it means to be digitally literate
- Sharing and developing good practice in teaching through development of open educational resources (OERs)

# Research question

- How can the characteristics of home uses of digital literacy be embedded effectively in classroom curriculum and pedagogy?



1 nursery, 4 primary schools,  
4 secondary schools, 1 special school

University researchers

Local authority

Industry partners

Pre-service teachers

## Research Tools

- Photographs
- Videos
- Interviews
- Critical reflections
- Blogs
- Twitter

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**Digital literacy  
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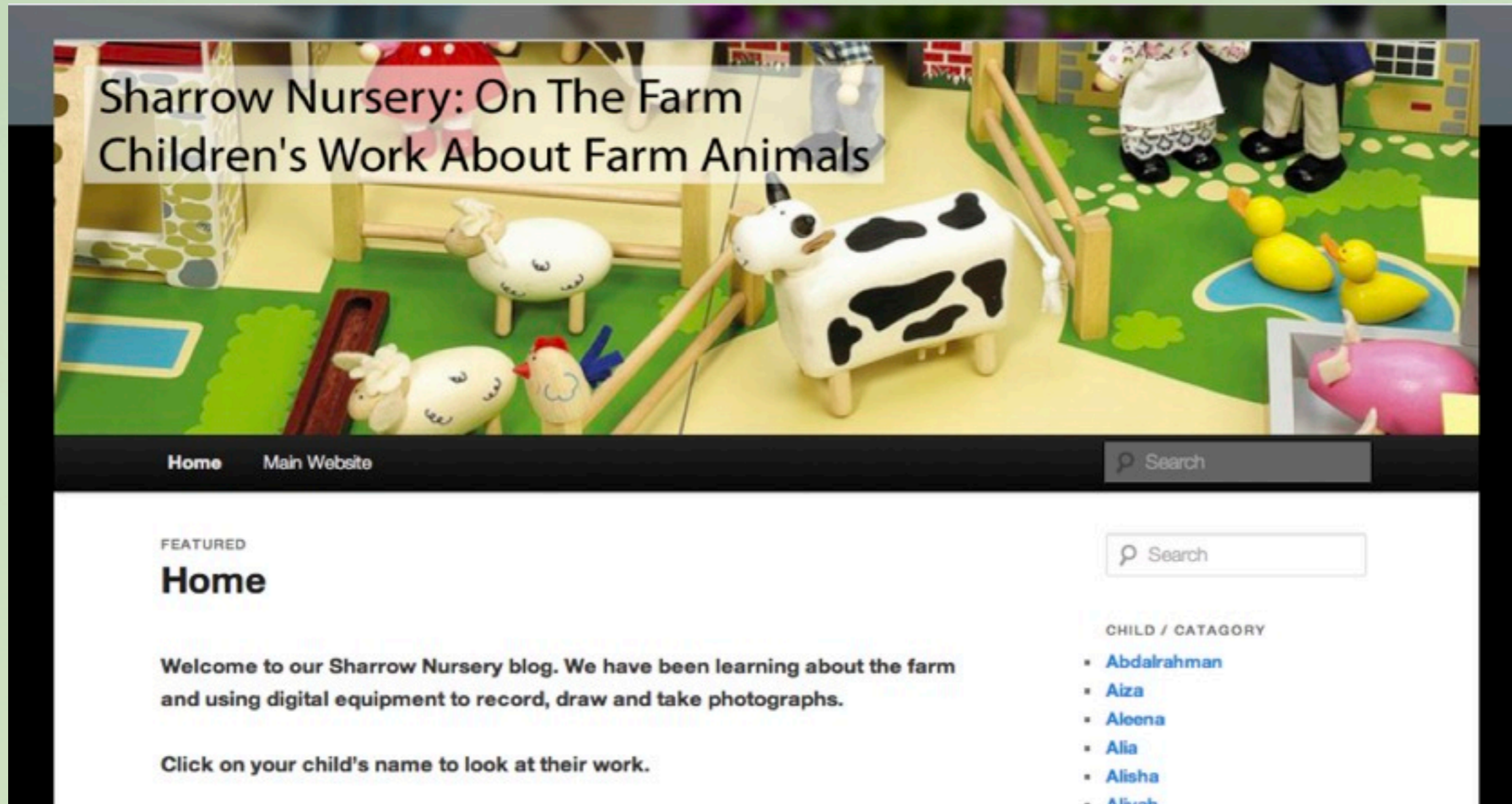
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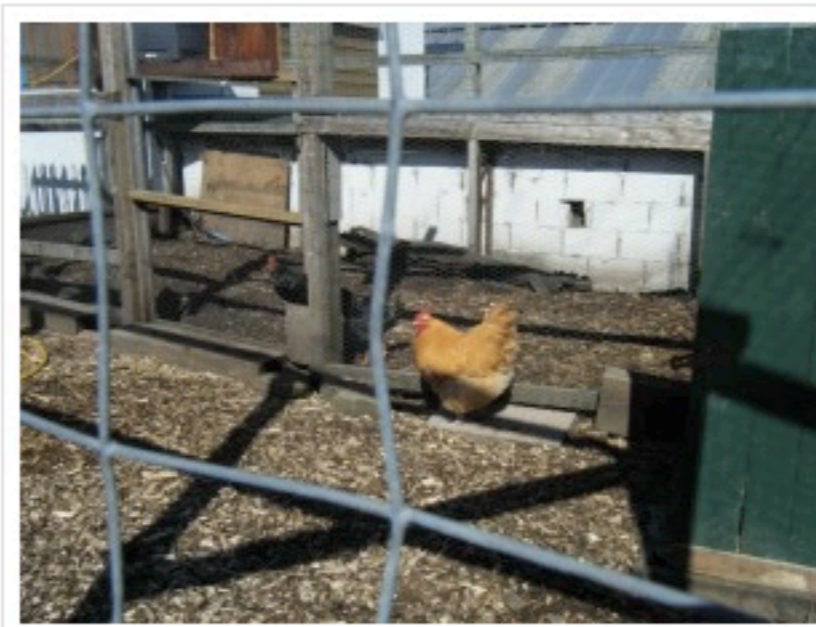
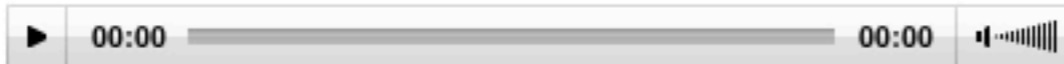
Playful

# Trans-mode/media



The screenshot displays the Sharrow Nursery website. At the top, a banner image shows a nursery room with various farm animal toys, including a cow, sheep, and ducks. A text overlay on the banner reads: "Sharrow Nursery: On The Farm Children's Work About Farm Animals". Below the banner is a dark navigation bar with "Home" and "Main Website" links on the left, and a search bar on the right. The main content area features a "FEATURED" section with the heading "Home" and a welcome message: "Welcome to our Sharrow Nursery blog. We have been learning about the farm and using digital equipment to record, draw and take photographs. Click on your child's name to look at their work." To the right of the main text is another search bar and a "CHILD / CATEGORY" list with links for Abdalrahman, Aiza, Aleena, Alia, Alisha, and Alivah.

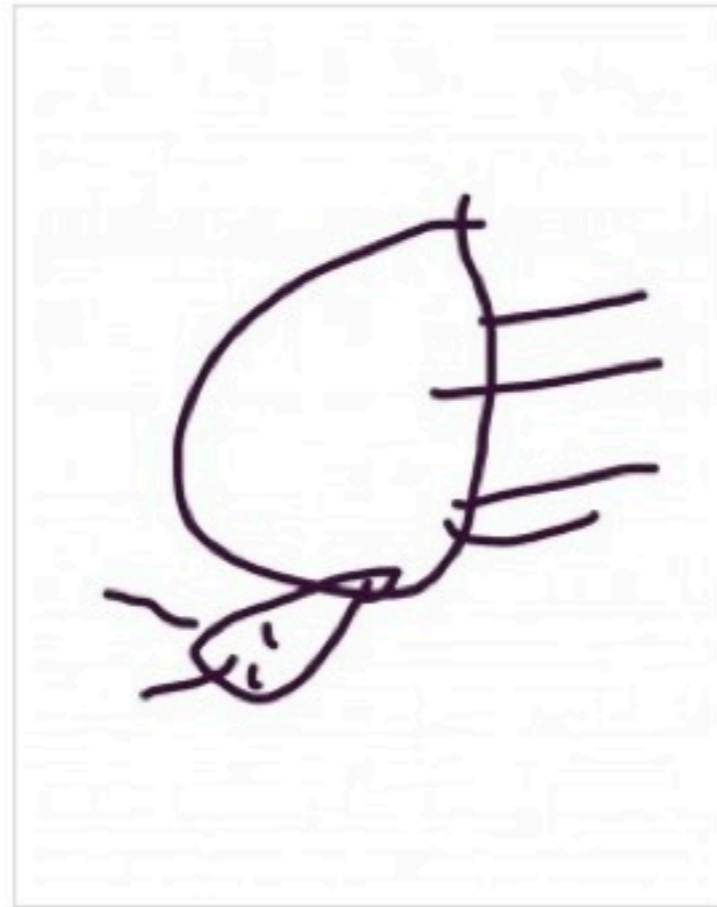
## Sharrow Nursery





# See our iPad drawings from the farm.

Posted on [May 28, 2012](#) by [nursery](#)



# MONTENEY PRIMARY SCHOOL

Monteney Web Portal    Resources Used    You are not logged in. (Login)

## Monster @Monteney


Monster

Site news

(No news has been posted yet)

Available courses



[Using Scratch: Creating My Monster](#)



**Using Scratch: Creating My Monster**

Use "Scratch" to create your very own Monster. Add scripts to make him move, talk or play games.

*You will need 'Java' installed to see the Scratch activities.*



@

## Topic outline

Using Scratch: My Monster

**1. Let Us Be.....A Computer Programmer**

2. Let Us Create.....Our First Sprite

3. Our First Sprites

4. Making Them Move

5. Let's Talk

6. Adding A Background

**Monteney Aviary**

*Aviary* EDUCATION

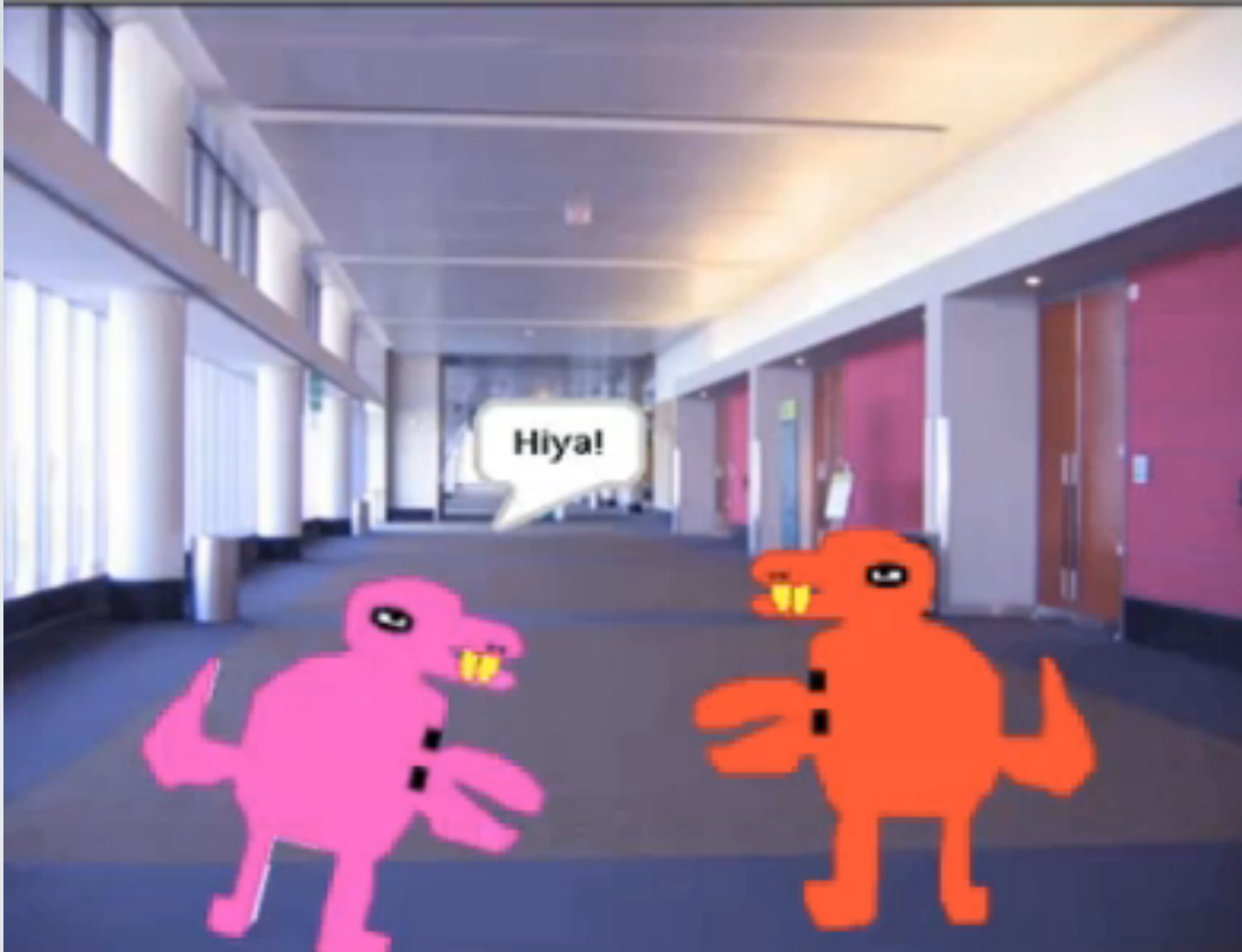
Monteney > Login



Scratch is a free download-  
Click the link below

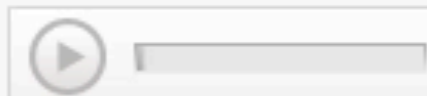
**Scratch**





Hiya!

*Come and listen to our Monster designs.*



fotobabble

# Monster Poems



**M**y monster likes to eat chicken nuggets  
**O**n Sundays my monster is very dirty, but some days he is very clean  
**N**ever tell my monster he is dirty, or he will bite you  
**S**ometimes my monster is very naughty, but sometimes he's very well behaved  
**T**oday is my monster's birthday, so he's having a zombie duck party  
**E**veryone wants to come to my monster's party because he's very cool  
**R**ob the zombie duck can't decide what type of cake to have for his birthday party, but I think he will have chocolate cake this time

# TRANS-MODE/ MEDIA: KEY PRINCIPLES

- Reading and writing of alphabetic texts embedded in the digital practices - seamless interface
- Children engaged in a wide range of multimodal design activities that enable them to understand and reflect on the affordances of modes
- Skills involved learning coding - important for developing agency in relation to digital texts

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space

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# MUNDELLA PRIMARY SCHOOL



# DAVID HOCKNEY - A BIGGER SPLASH



The children were shown how to use the Brushes app





The children showed their parents  
how to use the iPads













# Blog

**Mrs Cosgrove's Comets**  
OUR LEARNING IN Y2

[HOME](#)

[ALL ABOUT US](#)

[FOOD FOR THOUGHT](#)

[NATIVITY SONGS](#)



[← Bigger Bloom](#)

[One Moment in Time →](#)

**25  
APR**

## Children's Festival A Bigger Bloom

We had such an amazing day with Richard Johnson today. A real-life artist!





**Anna**

May 11, 2012 at 1:00 pm

Hi Comets!

I came in to see some of you working with Richard Johnson last month, and was flabbergasted by all the artwork that was going on! Those flowers are excellent!! You are really skilful using those ipads!

I have a couple of questions that I wondered if you could answer.....

this is the first question

What did you enjoy most about painting with an ipad?

[Reply](#)



**Y2 Comets**

May 13, 2012 at 10:47 am

That when you have finished you can play it

Gabriella 😊

[Reply](#)



**Y2 Comets**

May 14, 2012 at 1:11 pm

What I liked best on the I pads was where we get to go on the colour wheel and pick a colour and the other bit was where we get to draw the flower and pick how fat or thin you want your brush to be. 😊

Courtney xxx 😊

- Tweets >
- Following >
- Followers >
- Favorites >
- Lists >



- Who to follow · Refresh · View all
- 
**Whats on Sheffield** @event\_shef...  
[Follow](#)
  - 
**sheffieldblog** @sheffieldblog  
[Follow](#)
  - 
**Streets Ahead** @sccstreetsahead



**Mundella Comets Y2**  
**@MundellaComets**  
 We are loving our learning in Y2!  
<http://mundellacomets.wordpress.com>

**901** TWEETS    **14** FOLLOWING    **102** FOLLOWERS
 

- Tweets**
- 
**Mundella School** @MundellaSchool 4 hrs  
 The comet Pan-STARRS should be visible tonight if the skies stay clear! Look above the moon after sunset, should make a path left to right ☐  
 Retweeted by Mundella Comets Y2  
[Expand](#)
  - 
**Mundella Comets Y2** @MundellaComets 5 hrs  
 Brilliant write up in today's Star about #FAFriday [bit.ly/Z03azx](http://bit.ly/Z03azx)  
[Expand](#)

# INTERGENERATIONAL PRACTICES: KEY PRINCIPLES

- Children engaging with older (and younger) generations outside of the classroom in ‘authentic’ digital literacy practices (through the exhibition, blog, Twitter stream)
- Children in role as experts (when teaching parents)

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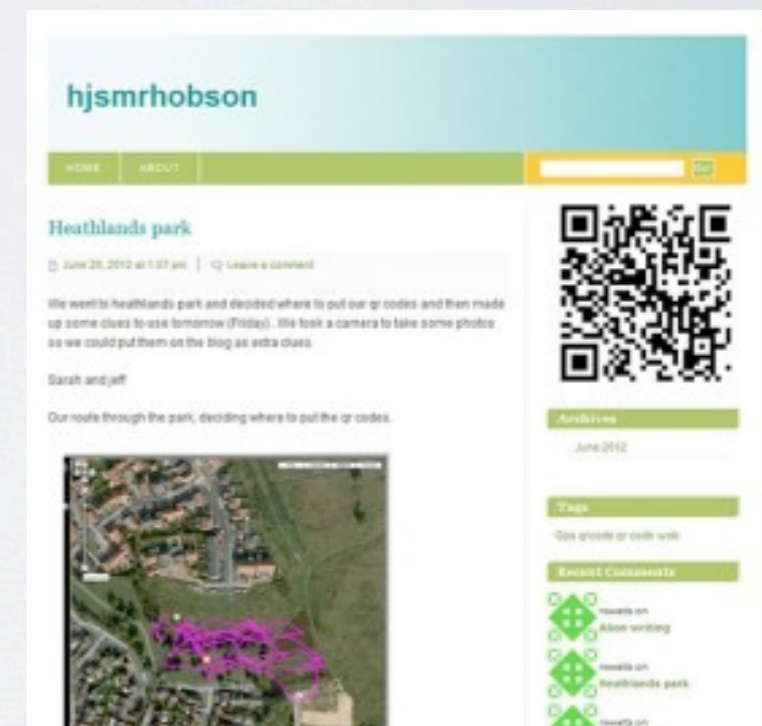
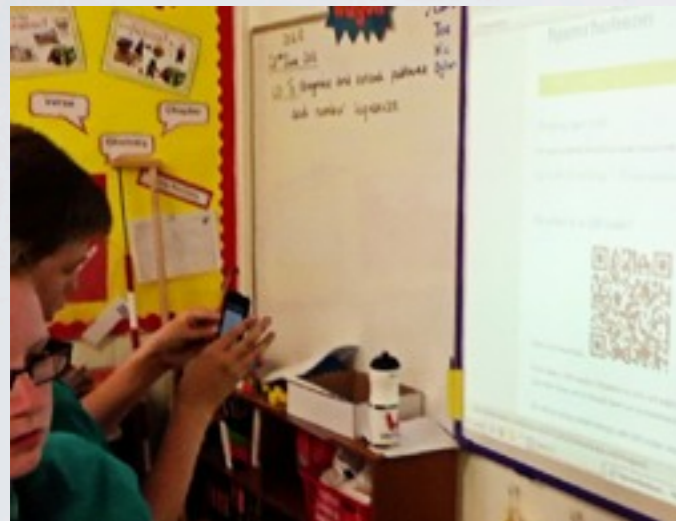
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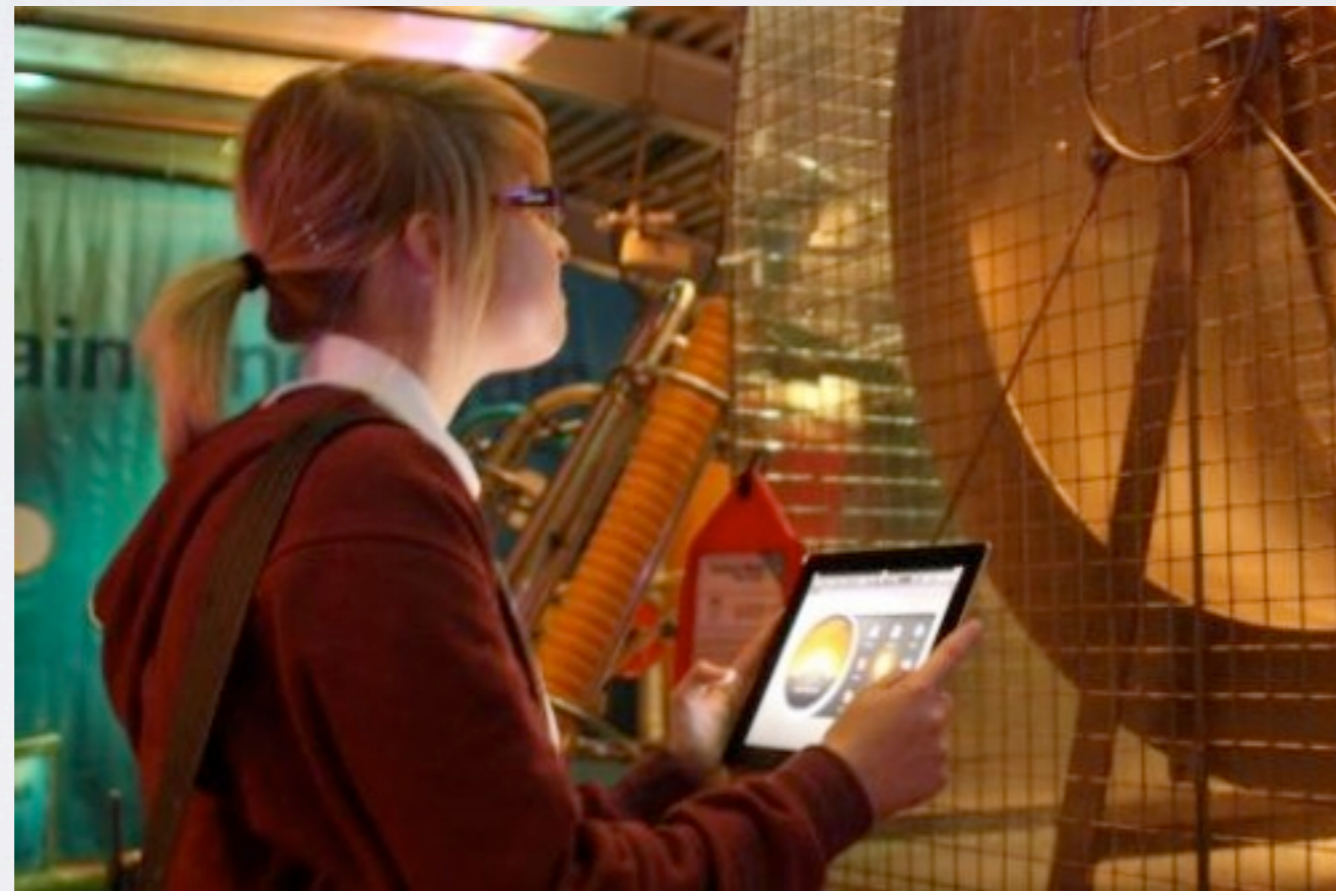
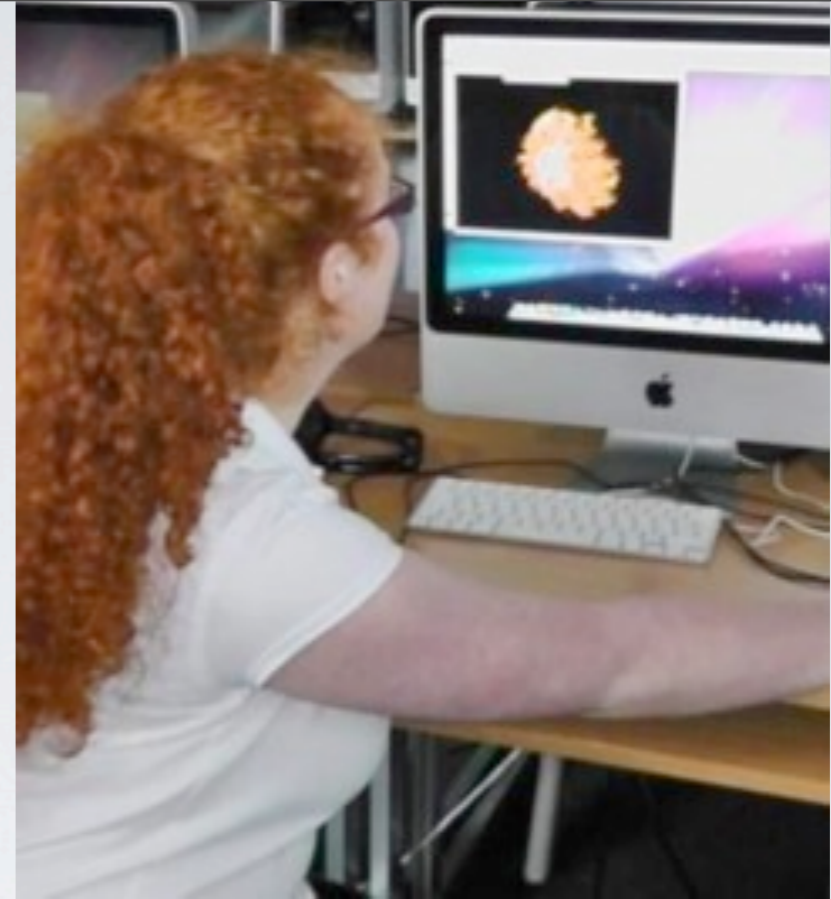
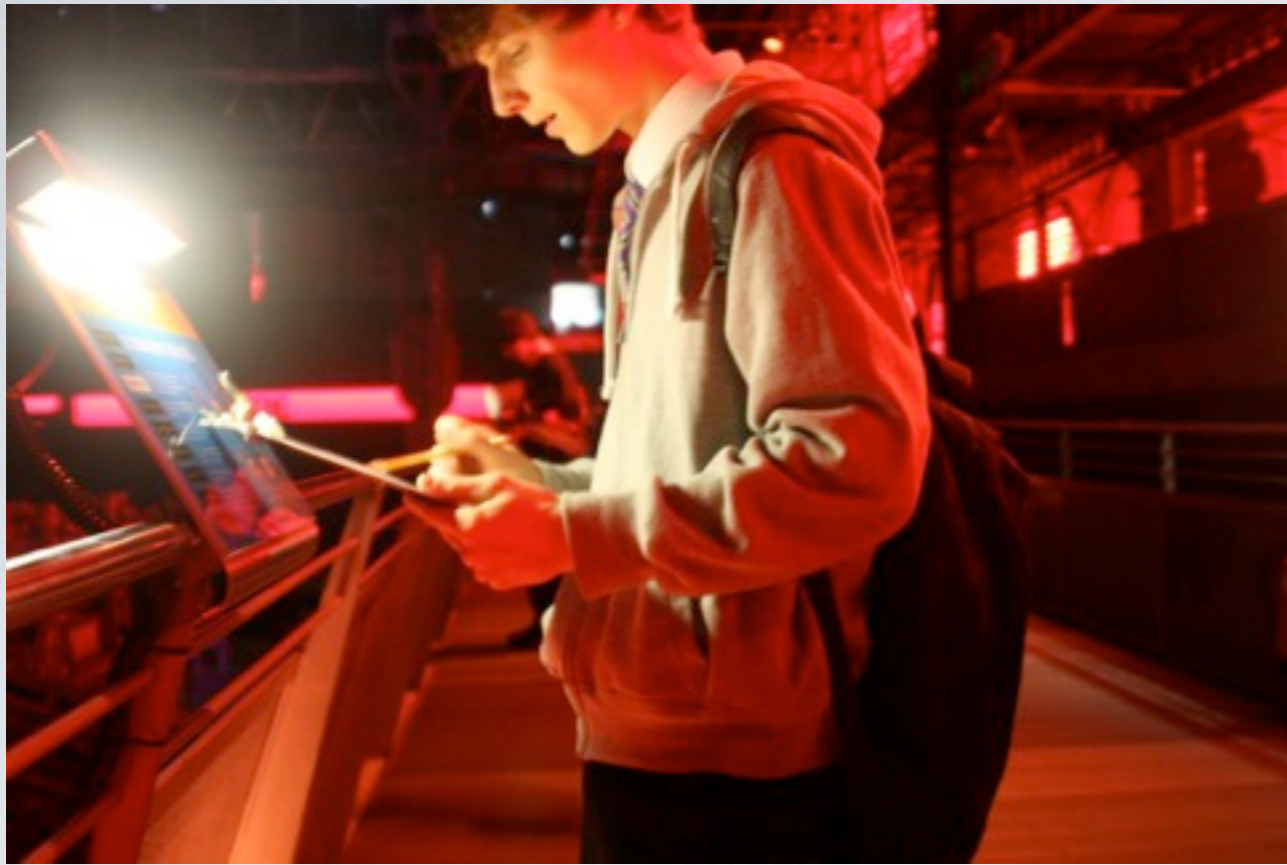
# Online/ offline blurred: Halfway Primary School



# Winterhill Comprehensive School







# ONLINE/ OFFLINE PRACTICES: KEY PRINCIPLES

- Online texts related seamlessly to offline in ways that replicate out-of-school life
- Meaningful engagement with communities outside the classroom - local parks and museums (Jim - pupils were, "Learning to write for a real audience rather than for an invented one")
- Literacy learning embedded in interdisciplinary learning across the arts and sciences
- Learning as distributed and participatory (Lankshear and Knobel, 2011)

Mobile -  
crossing time/  
space

Embedded  
in the  
everyday

Passion-driven

Intergenerational

**Digital literacy  
in homes/communities  
AND  
engaged classrooms**

Online/ offline  
blurred

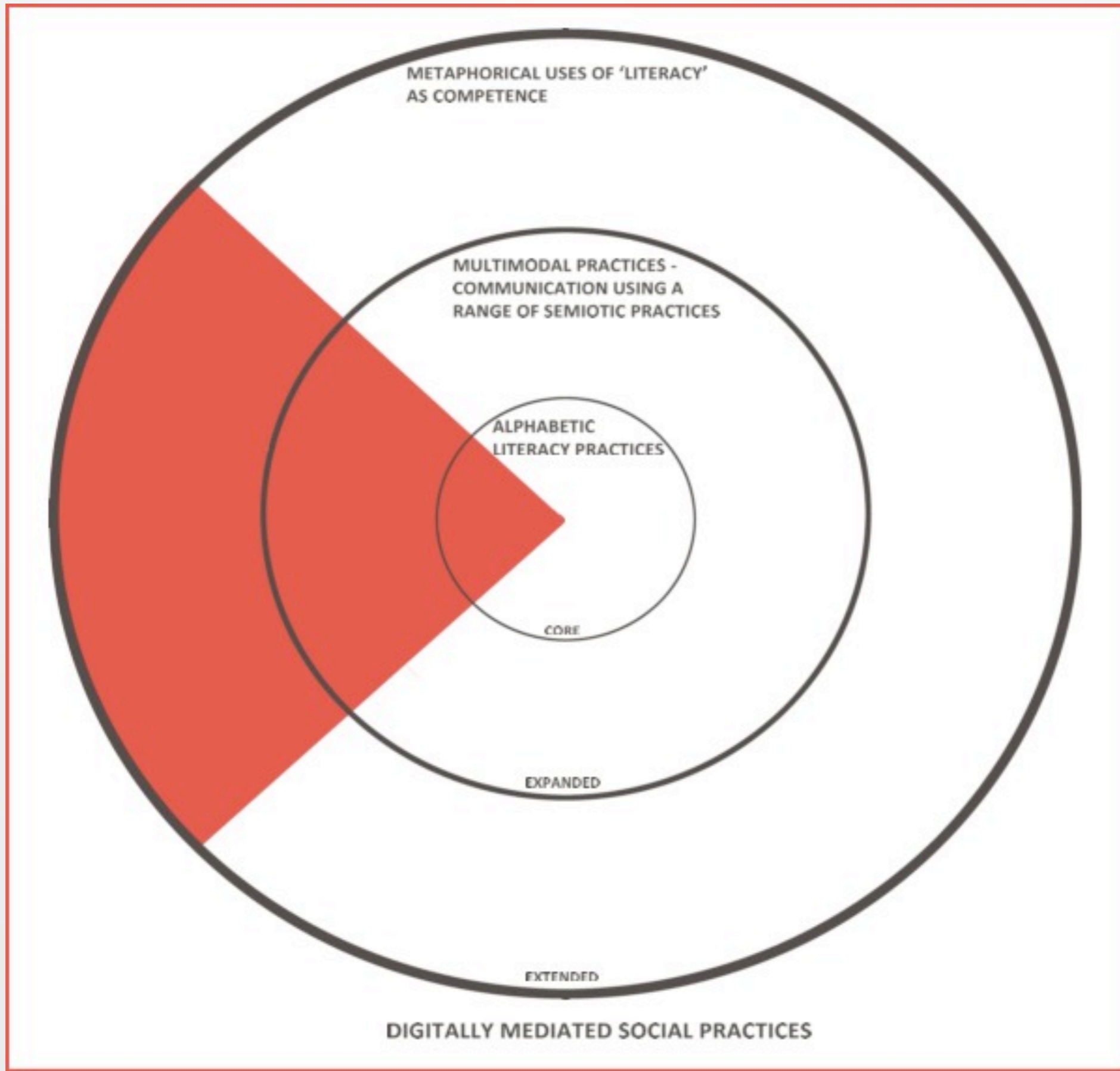
Trans-modes/  
media

Glocal

Shaped by  
popular culture

Networked

Playful



# FINAL THOUGHTS

- Engaged pedagogies do not have to replicate exactly home experiences, but should draw on some of the main characteristics in the classroom in ways that are meaningful and authentic.
- We should recognise that children's home experiences will be very different and not assume knowledge of all digital literacy texts/practices.
- Children's skills and knowledge should be built upon and extended, not left as they are in home contexts.
- Critical digital literacy practices should be embedded across the projects.
- This should be only one pedagogical strategy of many - children need a variety of approaches to literacy learning in the 21st century.

**DIGITAL FUTURES IN TEACHER EDUCATION**

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**THINKING SPACE**

An introduction to Thinking Space

**Username**

# Digital Futures in Teacher Education

**An Open Resource on Digital Literacy for Educators, Teachers and Schools**



**Introduction**



**About Digital Literacy**



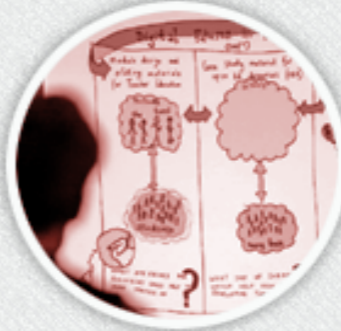
**Practice with Digital Literacy**



**Teacher Education and Digital Literacy**



**Examples of Practice**



**The Story of DeFT**

<http://www.digitalfutures.org/>

# DIGITAL FUTURES IN TEACHER EDUCATION

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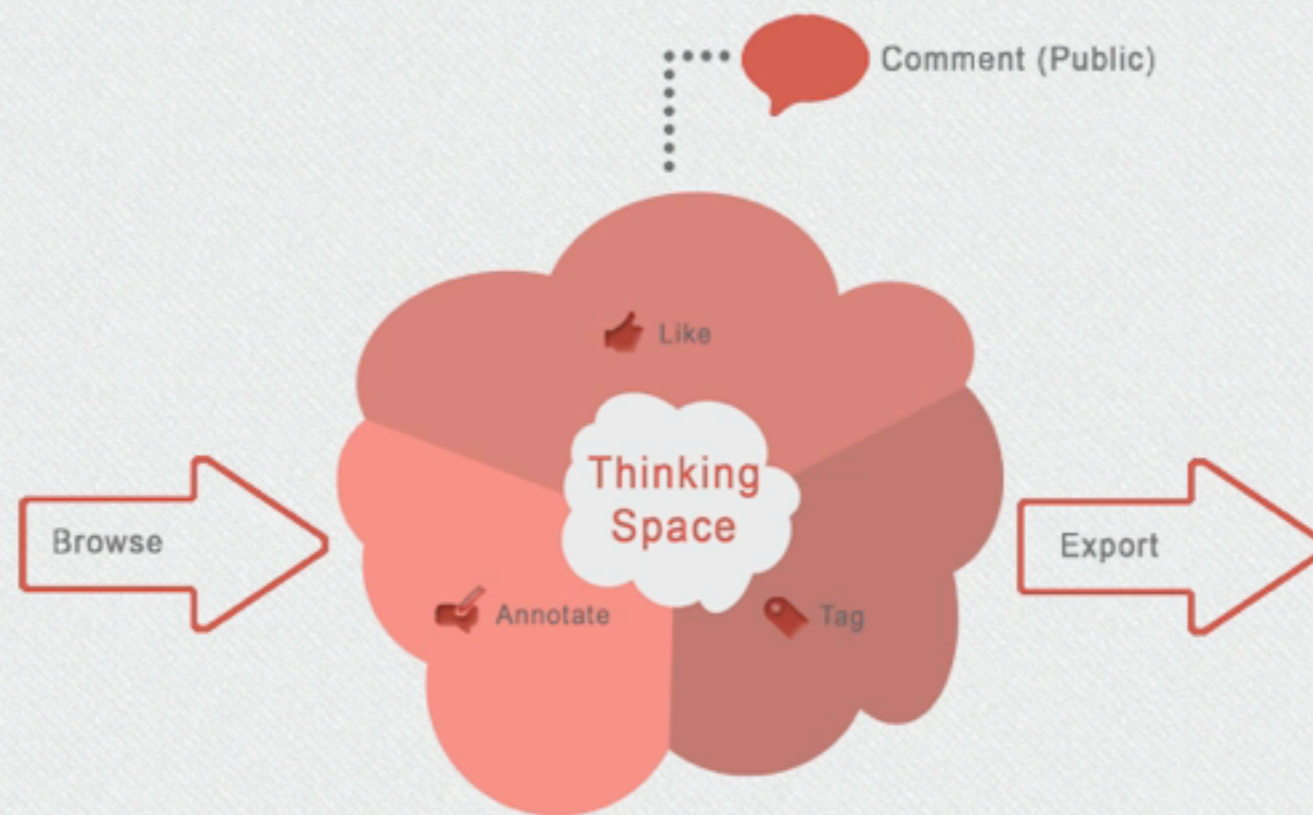
Username

Password

## Introduction to Thinking Space

### My Open Textbook

To use Thinking Space you need to **register** with the DeFT Open Textbook. This is a simple username and password registration that asks for a valid email address. No personal information is required.



<http://www.digitalfutures.org/>

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Thank you!