

APPENDIX A: PARENT/GUARDIAN AND CHILD CONSENT FORM



Parent/Guardian and Child Consent Form

Study Title: - **eCUTE Project**

Name [Parent or guardian]

Child's Name:

Address:
.....

I have discussed this study with my child/children and I give consent for my child/children to be a participant. We have both been informed about what participation will involve and I understand that I can withdraw my child/children at any time without giving reason and without penalty.

I give consent for my child/children's supplied data to be discussed by research workers in the study, online and to be used for research dissemination.

I also give consent for photographs and videos to be made relating to my child's/children's participation and understand that these will ONLY be used for research discussion and dissemination.

Photographs Yes Video Yes

Signed

[Parent or Guardian]

Date:

This study has been approved by the University of Sunderland Ethics Committee

APPENDIX B: PARENT/GUARDIAN INFORMATION SHEET

eCUTE Project Participation

This study is part of a European project called eCUTE, which focuses on enhancing learning through the use of technology. As part of this project we are trying to develop new ways to evaluate interactive games and applications. However, our aim is not just to evaluate interactive applications, but also to understand how children and teenagers want to be evaluated. Evaluation is when we ask people what they think of a story, game or a piece of software. The idea that we are studying with your child (ren)'s help is the use of an evaluation approach based on a child/participant-centered approach. During their participation in the project, they will use an iPad to control a game. At certain points we will ask your child(ren) to tell us about their experiences, ideas and thoughts about the sessions both in words and in pictures.

The results and outputs from this study will be discussed within the eCUTE Project and may be used for research dissemination. Taking part in the study is entirely voluntary and will be conducted over several sessions, your child (ren) are free to stop at any time. This study has been approved by the University of Sunderland Research Ethics Committee.

Contact Details for Further Information

If you have any questions about the study or issues you want to discuss, contact Lynne Hall [0191 515 3863]. You can also contact the Chairperson of the Research Ethics Committee of the University of Sunderland:

Dr. R Pullen, Chairperson of Research Ethics Committee, Faculty of Applied Sciences, University of Sunderland, Sunderland, Tel: 0191 515 2609, email: robert.pullen@sunderland.ac.uk



APPENDIX C: CHILD INFORMATION SHEET

The idea that we are studying, with your help, is the way you can help use, make and test new games for schools.

During your involvement with the project, you will be asked to use an iPad to control a PC and testing new software.

At different times we will ask you what you think of the things you have done.

Thank you,

The Research Team, University of Sunderland.



APPENDIX D: MESSY SCALE

(Matson Evaluation of Social Skills with Youngsters)

Social Skills/Assertiveness Subscale

MESSY QUESTIONNAIRE: SOCIAL SKILLS/ASSERTIVENESS SUBSCALE

*The Matson Evaluation of Social Skills with Youngsters: Social
Skills/Assertiveness Subscale*

I help a friend who is hurt:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I cheer up a friend who is hurt:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I feel good if I help someone:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I ask if I can be of help:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I ask others how they are, what they have been doing etc.:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I do nice things for people who are nice to me:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I stick up for my friends:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I look at people when they are speaking:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I say 'thank you' and I am happy when someone does something for me:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I laugh at other people's jokes and funny stories:

Strongly Agree Agree Neutral Disagree Strongly Disagree

I share what I have with others:

Strongly Agree Agree Neutral Disagree Strongly Disagree

<i>Agree</i>				<i>Disagree</i>
I know how to make friends:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I feel happy when someone else does well:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I ask questions when talking with others:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I feel sorry when I hurt someone:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I walk up to people and start a conversation:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I see my friends often:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I call people by their names:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I take care of other's property as if it were my own:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I show my feelings:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I keep secrets well:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I join in games with other children:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I look at people when I talk with them:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I explain things more than I need to:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>
I make other people laugh:				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Strongly</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly</i>
<i>Agree</i>				<i>Disagree</i>

APPENDIX E: CQS – Cultural Intelligence Scale

The Cultural Intelligence Scale was developed to test Early and Ang's (2003) conceptualization of cultural intelligence. The CQS provides a valid and reliable measure of a person's ability to function effectively in culturally diverse situations. The CQS measures four factors Metacognitive CQ, Cognitive CQ, Motivational CQ and Behavioral CQ. For the purpose of evaluating the MIXER application we will only be using the Behavioral CQ factor of the scale.

The CQ-Behavior measures the child's capability to adapt verbal and nonverbal behaviour so it is appropriate for different cultures. It includes having a flexible repertoire of behavioural responses that are appropriate in a variety of situations and having the capability to modify both verbal and nonverbal behaviour based on those involved in a specific interaction or in a particular setting.

A comprehension study was conducted in Sunderland in June 2012 to test children's understanding of the CQS as some of the words and phrases used were deemed to be a little advanced for the target age group for MIXER. Children were given a copy of the CQS and asked to underline any words or phrases they did not understand. The children then used iPads to look up the definitions of these words and were asked to provide suggestions for replacements. These words/phrases were replaced in the CQS and the updated version is shown below. Also, as the MIXER application is focusing on 'difference' as opposed to culture the word culture was replaced with 'a different background' as the children's experience of learning about culture includes learning about culture in Geography and RE as being about different religions, places, foods and languages etc.

The full version of the CQS is shown below, the Behavioral CQ sections that we will be embedding into the MIXER application are shown in bold:

Circle the answer that BEST describes you AS YOU REALLY ARE .

1 = strongly disagree; 7 = strongly agree

I am aware of the things I know about others I use when playing or working with people with different backgrounds.

1 2 3 4 5 6 7

I change what I believe about people as I work or play with people from a background that I don't know.

1 2 3 4 5 6 7

I am aware of what I know about people of different backgrounds and use this when I work or play with people of different backgrounds.

1 2 3 4 5 6 7

I check if I am right as I work and play with people from different backgrounds.

1 2 3 4 5 6 7

I know about the rules and money of people with different backgrounds.

1 2 3 4 5 6 7

I know the rules (e.g., vocabulary, grammar) of other languages.

1 2 3 4 5 6 7

I know the values and religious beliefs of people with a different background.

1 2 3 4 5 6 7

I know how people with a different background get married.

1 2 3 4 5 6 7

I know about arts and crafts of people with a different background.

1 2 3 4 5 6 7

I know why peoples body movements are different when they are talking.

1 2 3 4 5 6 7

I enjoy playing or working with people from a different background.

1 2 3 4 5 6 7

I am confident that I can work or play with locals in a place that I don't know.

1 2 3 4 5 6 7

I am sure I can deal with the stresses of adjusting to a place that is new to me.

1 2 3 4 5 6 7

I enjoy living in places that are unfamiliar to me.

1 2 3 4 5 6 7

I am confident that I can adjust to the way people shop in a different place.

1 2 3 4 5 6 7

I change the way I talk (e.g., accent, tone) when working or playing with people from a different background.

1 2 3 4 5 6 7

I use pause and silence differently to suit different situations involving people from a different background.

1 2 3 4 5 6 7

I vary the rate of my speaking when dealing with people from a different background if a situation requires it.

1 2 3 4 5 6 7

I change the way I move my body when dealing with people from a different background if a situation requires it.

1 2 3 4 5 6 7

I alter my facial expressions when dealing with people from a different background if a situation requires it.

1 2 3 4 5 6 7

APPENDIX F: Bryant's Empathy Index

Bryant's Empathy Index is a three factor questionnaire. F1 deals with understanding feelings, F2 covers feelings of sadness and F3 asks about tearful reaction. Responses to sections F2 and F3 bear no relevance in the evaluation of MIXER and will therefore be excluded from the evaluation.

The full version of Bryant's Empathy Index is shown below. The section to be used in the evaluation of MIXER is F1 – Understanding Feelings - these items are indicated below in ***bold italics***:

Answer **Yes** or **No** to each of the questions.

1 It makes me sad to see a girl who can't find anyone to play with

2 People who kiss and hug in public are silly

3 Boys who cry because they are happy are silly

4 I really like to watch people open presents, even when I don't get a present myself

5 Seeing a boy who is crying makes me feel like crying

6 I get upset when I see a girl being hurt

7 Even when I don't know why someone is laughing, I laugh too

8 Sometimes I cry when I watch TV

9 Girls who cry because they are happy are silly

10 It's hard for me to see why someone else gets upset

11 I get upset when I see an animal being hurt

12 It makes me sad to see a boy who can't find anyone to play with

13 Some songs make me so sad I feel like crying

14 I get upset when I see a boy being hurt

15 Grown-ups sometimes cry even when they have nothing to be sad about

16 It's silly to treat dogs and cats as though they have feelings like people

17 I get mad when I see a classmate pretending to need help from the teacher all the time

18 Kids who have no friends probably don't want any

19 Seeing a girl who is crying makes me feel like crying

20 I think it is funny that some people cry during a sad movie or while reading a sad book

21 I am able to eat all my cookies even when I see someone looking at me wanting one

22 I don't feel upset when I see a classmate being punished by a teacher for not obeying school rules

APPENDIX G: Reviewing Children's Media

Reviewing Children's Media

In addition to consulting academic literature to gain an understanding of the theory behind evaluation, response bias and engagement, a review of media targeted to the age group of 9-11 year olds was also conducted. The aim of this review was to inform the design of the workbooks by understanding the design practice applied in the production of children's media. The reviewed media included both educational and recreational literature, as these are the two most frequently accessed forms of literature by 9 to 11 year olds. Educational media included various SATs and Key stage 2 support materials in both print and online. However, as fun and enjoyment were crucial design features in terms of engagement, recreational media was the main focus of the review, there was also a lot more variety in the recreational literature which included comic books / magazines, special interest magazines (e.g. Doctor Who, Bird Life etc.), activity books / sheets, websites, sticker collecting books, fiction and non-fiction books and annuals. The review focused on the following; firstly *Content and Activities*, it was important to understand what content and activities were fun for children. Fun and enjoyment were selected as a measure of the children's engagement with the evaluation materials. To design evaluation as a fun experience, (as similar as possible to the fun experienced when completing a recreational activity book), it was not only helpful and inspiring to look at age appropriate media but it was also essential that the designs of the workbooks were not based on assumptions of what children's media 'should contain' or how they 'should look'. The literature review highlighted several key areas that were to be further established via the review of children's media. These included the the need for variety in the levels of

engagement experienced. Engagement should vary, for example, by starting low and building, then dropping back and then building again. This pattern of peaks and troughs should be evident in the placement of activities in the workbooks and aligns with (Hanna & Risdén, 1997) recommendation that children's focus when completing demanding activities should be limited to short five to ten minute intervals, combined with breaks in activity intensity. It was intended to break up evaluation activities in the workbooks with filler activities and it was anticipated that the review of children's media would verify these design decisions. Secondly, *Layout and Aesthetics*, elements such as colours, fonts and use of images etc. were reviewed for similar reasons. It would be easy to assume that primary colours and juvenile fonts (e.g. Bradley or comic sans) would be a suitable choice in the design of children's media, it was important and worthwhile to give a deeper consideration to these elements of the design. Finally, the use of characters and narrative applied throughout the literature (i.e. animals or characters from TV/film) was also reviewed. Narrative and character engagement form a crucial part of the Transmedia Evaluation methodology (see section 3.2), and were also one of the eCute evaluation requirements for MIXER (see section 3.4).

Content and Activities

While the content in the media reviewed varied depending on the topic of the publication, there was a trend towards providing a mix of informational features and entertainment. In addition to the subject specific articles, i.e. Moths in Bird Life magazine [ref] and Justin Bieber in Top of the Pops [ref], there were also activities such as word searches, mazes, spot the difference and colouring activities [e.g. where examples can be found]. These activities were interspersed between articles, providing variety to the reader to maintain engagement. Although many of

the publications reviewed were not traditional comic books, there were comic strips used as a story telling mechanism in the majority of the publications.



Figure 1: Example comic strip from Bird Life magazine

Stickers were a found frequently in many of the publications. In the form of sticker collecting books (e.g. Panini) or free stickers with comics and magazines and some books had special plastic coated pages so that stickers could be added and repositioned.

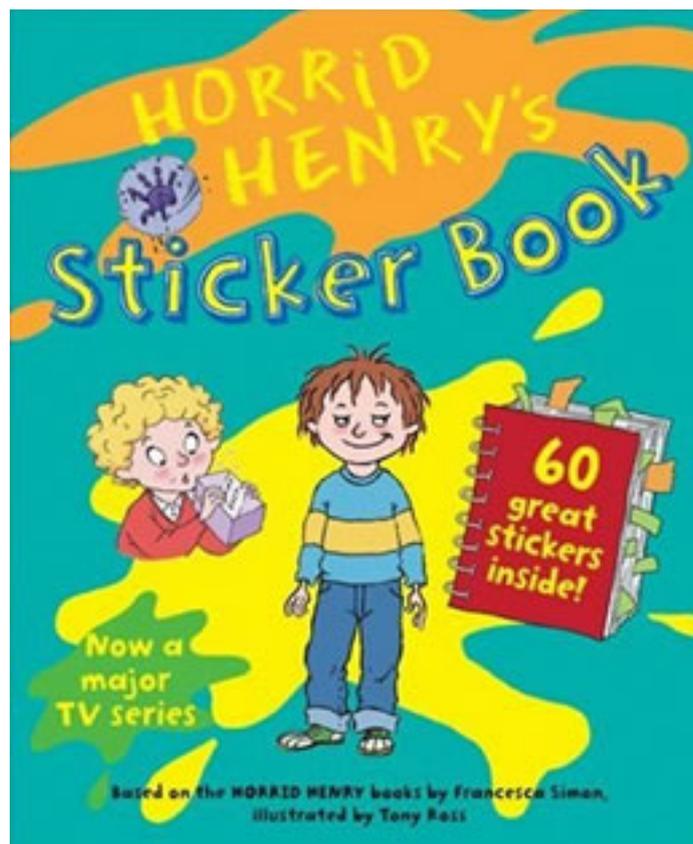


Figure 2: Examples of sticker book activities

Quizzes were another popular activity. While the subjects varied the format was frequently the same, children answer questions and then calculate if they were mostly A, B or C before reading a description of their result at the bottom of the page, (see figure 3). The quiz results/outcomes were generic descriptions intended, in general, to make the reader feel happy about themselves and their

choices. The question and answer format is similar to questionnaires but the quizzes provide immediate feedback to the reader.



Figure 3: Example of quiz feedback

Layout

The layouts used in the paper based publications versus an online/digital format had obvious differences, for example, digital applications are able to make use of features such as 'next' buttons to help guide a user through an online experience. Producers of paper-based literature maintain engagement (novelty) by making the design of each page layout very different in appearance from the next.



Figure 4: Producers maintain engagement / novelty by designing pages that vary in appearance

However, to ensure that the layout of each individual page is readable the designs contain an overall consistency, for example, by using borders and different coloured backgrounds to highlight the information in each section. At first glance the page (see figure 5) looks haphazard, but each section is laid out with a title, a piece of text and an image and this is consistent throughout this page.



Figure 5: Layouts look casual and haphazard while maintaining consistent design

Principles to aid the reader

Numbering (see figure 6) and arrows also help guide the reader from the start to the end of the article.



Figure 6: Use of numbering to guide readers through the article (Taken from REF Top of the Pops, Issue 228, 12.09.12)

In the 'Epic Nature Spotter' activity below (McDonalds, 2013) the children are asked to follow a trail and count the wildlife that they spot to see which character spotted the most. The use of a curved line in this activity provides several benefits; firstly, the activity has a clear signposting of the start and end of the activity. This is very useful in an evaluation context, particularly in a classroom setting where the children need to complete the task with as little assistance as possible. The children can see where to start, where they need to get to and can complete the task as they go. Secondly, placing questions on a curved, rather than straight line may reduce occurrences of the straight-lining response bias.

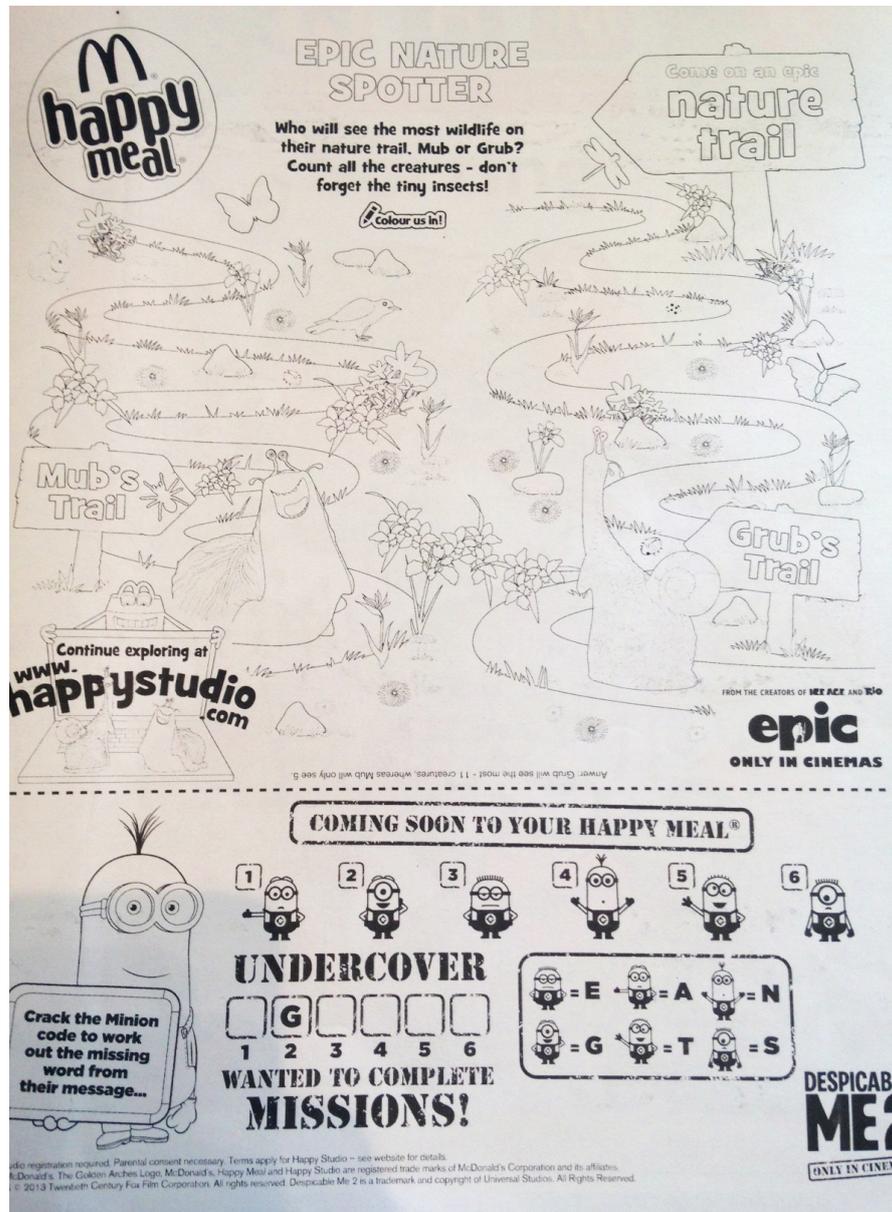


Figure 7: McDonalds activity sheet

Aesthetic elements

As is typical with publications designed for a younger audience the use of colour is bold, bright, clashing and eye catching.



Figure 8: Bright bold fonts and colours used

Similarly, wide ranges of fonts were applied within single page design layouts.

Images and other decorative elements, such as boxed fonts (see figure 8) borders and backgrounds were used on most pages.

Where publications were targeting a specific gender, the use of pink and blue was dominant as is shown in figure 9.





Figure 9: Gender specific media for children and teenagers

Use of characters and narrative

The Doctor Who magazine was a great example of transmedia entertainment. Characters from the TV show were used throughout the magazine with features and activities about the various characters and plot lines. The magazine also carried the Doctor Who theme throughout the features and activities provided, maintaining a strong link between the onscreen experience and the paper based publication.



Figure 10: Example of character usage

Lessons learnt for evaluation from children's media

Clearly, the producers of children's media understand how to engage children, with valuable lessons for the designers of evaluations with children. Whilst Transmedia Evaluation (see section 3.2) had previously focused purely on the obvious differences between evaluation materials and age appropriate media, with an aesthetic response to disengagement (Hall et al., 2013), on closer inspection of children's media it is evident that designing for engagement may also provide solutions to the existing issues relating to response bias by improving the user experience of evaluation. The following table provides a summary of the reviewed item, its possible purpose in reducing response bias in an evaluation context and where it was used in the design of the workbooks, along with the relevant section.

Media review item	Purpose	Used
Character / narrative theming throughout e.g. Doctor Who,	Introduces and reinforces character and scenario, embedding the evaluation into the narrative.	Tom is used throughout workbook 1 and 2. Workbook 3 was testing far transfer so Tom does not appear but is named once.
Filler activities – word searches, maze etc.	The media reviewed followed up a text heavy page with either a poster, a very visual picture or an activity	The workbooks follow a similar pattern of filler activity, followed by evaluation activity, another filler activity etc.
Curved lines from McDonalds Epic Nature Spotter activity	Removing linearity from questionnaire format	Used throughout workbooks, New Friendzzz, which woodland animal, yes or no
Arrows and numbering to guide readers	Used to guide from start to end of activity so that no questions are missed – ensures 100% completion with minimal interruption/assistance	YES OR NO
Comic strips	Used in media to entertain, very visual way of story telling with small amounts of text reducing cognitive effort required	The Trip,
Quizzes	Engaging way of asking questions	Used in Which woodland animal are you
Stickers	Used as an alternative to pen/pencil. May delay response and encourage optimal response	Used in workbook 2 & 3, Purposefully not used in workbook one to offer novelty in workbook 2 Used in Who wins, True or false, and in Workbook 3 think fast page numbers