What is hypertext and why are kids good at it?

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Have you come across one of those books that invite you to "choose your own adventure"? The original ones were by Steve Jackson, but there are other versions now, including R L Stine's Goosebumps series - "Give Yourself Goosebumps".

In these types of books you make a decision at the bottom of each page, and depending on how you choose ("Do you fight the goblin or run away?"), you turn to a different page. So there's an exciting feeling (at least for a youngster!) that you're controlling the story yourself.

Hypertext can do that, too. It can give you - the reader - choices, and all you have to do is click to go there.

Of course on a Web page there can be a lot more than two choices. If you've used the Web you've seen it for yourself. You can have any number of links on a single web page, each one taking you to other parts of the page, the website, or other websites.

The text on each linked page should (if the website is properly designed) follow logically from a point on the first page, so it isn't like flipping through pages of a book at random. Clicking links takes you on a path through the website, a path on which you click rather than step. The path should read coherently, logically and consistently all the way through (whether it's a shopping trip through a catalogue to purchase or an exploration of deeper levels of a topic such as WWI trenches or repairing classic cars). You can step off the path onto another one whenever you like (start investigating WWI transport or classic aeroplanes instead), and if you return to the site another time, you can take a completely different route.

A good hypertext writer (or web site designer) will think about the navigation of the site - the way you get from place to place - as part of the writing process. If the hypertext is fiction like those choose-your-own-adventures – as opposed to the commercial/nonfiction sites we've been talking about up until now – the link should be an integral part of the story.

One of the simplest forms of hypertext uses just that choose-your-own-adventure structure. It's called a "tree fiction" because the story constantly branches. In this kind of story, the number of endings multiplies every time a new branch is created, so with one start, even with only two choices at each branch, after four choices there are 16 alternative endings.

Conventionally, we are taught to write in a linear manner: every story must have a beginning, a middle and an end. We are taught writing techniques such as foreshadowing and development of character from beginning to end of a piece. In nonfiction we are told to introduce our subject at the beginning, discuss the points one by one and then summarise at the end. All these are linear techniques, designed for a reader who starts at the beginning and reads through to the end.

Hypertext doesn't necessarily work like this. It's more intuitive, allowing the reader to follow their inclination, to the read the story or text in a way that seems logical to them. Of course that means there are many more challenges for the writer.

Children who haven't yet fallen into linear ways of writing are quick to see the potential for branching stories and other ways of linking their own and others' writing together.

For an example of a choose-your-own-adventure type hypertext, see Daisy and the Intergalactic Travelling Salesmen at http://kotn.ntu.ac.uk/daisy on the Kids on the Net website

The Kids on the Net Guide to Writing a Hypertext Story – The Planet of Dreams

Writing the story itself

The Planet of Dreams is designed to have four chapters in each reading (which, allowing for the alternative chapters, means 14 chapters altogether) Chapter One has been written by children's author David Clayton. (A downloadable printable version is available.)

Talk with the class about the structure of a story. The setting is a new planet, and the main characters are a group of children coming to the planet to make a new home.

The story should have a beginning (this is Chapter One) a middle (chapters 2 and 3), and an end (chapter 4). The chapters in the middle should be written as some kind of adventure. The final chapter should tie up any loose ends and finish of the story with a good ending.

Author David Clayton's own ideas for the story development run as follows – this is just an example, and you are free to do whatever you and your class wish with the storyline. This is a five-chapter story.

> *Chapter 2: The children split up, some make part of the city into their old lives, houses. Others explore the huge city meeting new people. They explore how they can recreate their dreams and nightmares.*
>
> *Chapter 3: The more adventurous new children get into new danger sledging on the shiny ice-cold silver slopes beyond the city and beyond the protection of the glass. Meanwhile the 'conservative' planet children in the newcomers' recreated old world face an old danger, wild animals created by imagination but no cages, an open park but with tigers, lions and crocodiles. The new children outside are rescued just in time from the blazing light of the five orange suns of Karoo by their local friend who has warned them not to stay out long.*
>
> *Chapter 4: When the outside group get back they seek out the others, the planet children, and dream the old danger away for them i.e. getting rid of the lions etc. They are seriously frightened by the experience with the lions and tigers etc. They all settle into their new home/school but just as they relax - a lion appears at the door. How can this be? But the creature turns back into one of their local friends who laughs. 'We too have dreams,' he says. 'Welcome to Karoo!'*

David adds: "This idea is very open-ended as children can imagine anything they like for the settlers' dreams of their pasts. i.e, houses, game parks, swamps, caves, mines(1), involve themselves in any outside danger on the planet (creatures, invaders, activities etc)(2), have the local children involve themselves in any way they like in exploring the past (as in 1), have the new children rescued in any way they like from danger (2) by local adults and settle into any conditions they choose: old, new or a combination. The rule is, if you dream it up, on the planet, you alone can wish it away otherwise there is no threat. Other peoples dreams can cause you trouble. (Unless you have a Dream Master who can police everyone's dreams to stop things getting out of hand!)"

You can have children work individually, in pairs, or in groups, depending on the number of children involved in producing the 14 chapters. Some children could produce illustrations for the story. Pictures should have no coloured background if possible and be in clear, bright colours (e.g., felt tip rather than colouring pencil).

Decide on how long you have to do the project and divide it up so that each stage – the writing of chapter two, of three and of four, gets the same amount of time (sequentially) and enough time to get comments and redraft. For example, two days to write and one day to redraft at each stage is a total of 9 days for all three stages.

Technology points

It's always best to sketch out ideas on paper, then type the story and edit it in a word processor, and only when it is as good as it can be, transfer it to the Web form.

Illustrations, if included, should be produced on a computer, or scanned into a computer. They should be saved as JPEG format .jpg files, given identifiable filenames and emailed to kotn@ntu.ac.uk as attachments, with the body of the message indicating the artist for each picture. Do NOT use WordArt to produce pictures as they do not tranlsate into a web-visible format. Most scanning programs have a facility to save as .jpg files.

How to write chapters and links

Each section should be no more than about 500 words (and could be very much less!). Readers on the Web don't want too much text at a time.

End each section as openly as possible. Don't end it, e.g.

> *Lions and tigers appeared all around them. "What shall we do now?" asked Emily, frightened.*
> or
> *Should they run away or stay and fight the animals?*

which limits the imaginations of the following writers. Try to end it more openly with more possible courses of action:

> *Across the goldern river a strange sight was unfolding. "Whatever's that?" breathed Ahmed.*

There are other examples of "open" endings in the Daisy and the Intergalactic Travelling Salesmen story.

The last thing to write, when each chapter is complete, is the link text. Read the previous chapter again, and think about what word or short phrase would take the reader into the next chapter. The reader is going to have to choose between two links, so you want your link to be attractive enough to make them click, but not give too much away.

Not

The children go skiing

but something more intriguing like

A snowy adventure or

Danger on the slopes

that will encourage the reader to choose your chapter. It's like the cliffhanger at the end of the episode! Up to three or four short words is a good length for a link in this story.

Method for the project

Stage One: read a hypertext story
Read online with the class some hypertext stories that have choices. This is a good activity for a computer lab where the children can read the stories themselves and explore what happens when they click on different links. Examples include:

- Daisy and the Intergalactic Travelling Salesmen http://kotn.ntu.ac.uk/daisy
- Jacob the Ant http://kotn.ntu.ac.uk/porchester/journeymain.htm
- Pirates' Booty http://atschool.eduweb.co.uk/southwold/project/booty/booty.htm

Stage Two: Read Chapter One and discuss the story
Read Chapter One of The Planet of Dreams, written by David Clayton. Display the page on screen or use the printable version here. Discuss the structure of the story and how it might continue.

Look at the flow chart for the story. It is important that the teacher is clear from the start who is writing which chapter and allocate a code 2A, 4D or whatever. It helps to write the names of the authors on the flowchart. When the stories are saved on computer, use the codes 2A etc. in the filenames for quick identification. Keeping track of which story links to which is the worst job, so assigning them the right code throughout is vital.

Stage Three: Writing Chapter Two
All the children cannot write their stories at once, as some will have to wait for the others to be produced. First set two children or groups to produce a Chapter Two. Alternatively you could write one or both Chapter Twos collaboratively with the class. Once each chapter is written it should be commented on by the teacher and other children, rewritten if necessary, and the link text written.

Stage 4: Writing Chapter Three
Once the Chapter Twos are ready, chapter 2A is passed to two more children/groups and Chapter 2B is passed to two children/groups. Each child or group will read the two chapters leading up to the one they will write – Chapter Three. To the writers, the story is linear, and they probably should not know what is happening in the other branches of the story until the whole thing is complete. Chapter Threes are written, commented on and redrafted until as good as possible. Each group writes the link text that will lead into their Chapter Three.

Stage 5: Writing Chapter Four
Finally, each completed Chapter Three, with its preceding Chapter Two and a reminder of Chapter One, is passed to two more children/groups. Now there are eight groups working at once, two for each version of Chapter Three. Each group reads the sequence of Chapter One, Chapter Two and Chapter Three, and produces a fourth and final chapter wrapping up the story. It is commented on and redrafted. This may take the most redrafting to make sure that all the threads in the previous chapters are picked up on.

Stage 6: Entering the story on the website
When all the chapters are finished, the teacher, or a child or group, or even a helpful assistant or parent, can cut and paste the texts into the web form on the website. Care needs to be taken to put each piece of text into the correct box on the form. Refer to the flow chart to help with this. Send any illustrations to kotn@ntu.ac.uk as email attachments.

Stage 8: Test the story
Once all the texts have been accurately entered, test your hypertext story by looking at the URL http://kotn.ntu.ac.uk/hypertext/story.htm

Stage 9: Launch the story
If the story works, you can now show it off! If there is a problem and the story doesn't appear as you would expect, or does not follow on in the way you intended, contact kotn@ntu.ac.uk and we will sort out any technical hitches via email.

Extending the Hypertext Story Project

This is just one possible structure for a hypertext – indeed, the very simplest structure.

The point of web-writing is that it doesn't have to be linear. You can have a story with different kinds of branches, some of which are dead ends, so the reader has to go back and start again.
You can use other features of the Web to add interest to stories.

- Alternative endings – where there is one beginning, then everyone in the class writes a possible ending. On the Web, the reader would be able to select a link or perhaps a click a button allowing the computer to select a random ending from among those possible.

- Make a geographically based story "game" like Pirates' Booty.

- Tell a story from different points of view. Have everyone write the beginning of a story from a particular character's viewpoint (e.g., arriving at a haunted house) and then write one middle of the story collaboratively together (the ghosts appear and cause mayhem) then the children can each write an ending from their characters' point of view (see Over the Rainbow for an example).

- Write a collection of stories or poems or features on a single theme, and link them with a front page theme graphic, such as a map (e.g. for stories set in parts of a desert island), a quilt (see the Noon Quilt) or a string of lamps perhaps (which would suit a series of poems about Diwali). Clicking on different squares of the quilt or areas of the map would bring up the individual pieces. By writing collaboratively in this way the whole work becomes more than the sum of the parts, and it's an attractive way to present a collection of writing on a theme.

Kids on the Net does not have templates for these types of stories, but if you need help in transferring your stories into web pages, please get in touch with kotn@ntu.ac.uk