

THE DIGITAL CHILD SEMINAR BY DR KATE HIGHFIELD.

Dr Kate Highfield is a Lecturer in Early Childhood from Macquarie University Sydney. Kate was certainly an engaging and passionate speaker but what was really impressive was her knowledge of the range of educational apps on offer.

FACT BUSTER

Q: Do educational apps enhance your child's learning?

A: Some do, if used appropriately, but it's important to choose your children's apps carefully.

Some apps can enhance learning, particularly when they are to do with practicing specific skills or when they give the child the opportunity to create their own content and communicate in new ways.

Making screen time count

Not surprisingly, most parents seeking good quality educational apps will head to the education section of the app store. However these apps may not actually be very educational at all, research by Dr Highfield and colleagues has shown.

Around 85 per cent have a design that encourages only very basic or low level thinking skills. These can be a fun way for your child to practice a specific skill, such as learning times tables or letter sound recognition. (You still need to match the app carefully with your child's education level so they're not bored or intimidated).

But such "instructive, drill and practice" apps don't promote "higher order" thinking, which has much broader educational benefits.

Every time a child engages with an app, it influences the connections that form between nerve cells in their brain.

A lot of families have given your children access to only those low-level educational apps. Making sure your child's screen time is beneficial is important as research suggests children are using screens for an average of at least three hours a day and possibly more, which is well in excess of recommended guidelines for all screen time, including television.

Children over two should be using screens for around one to two hours a day at most. For the under-two's, the American Academy of Pediatrics recommends no screen time at all.

Best way of managing overuse is to talk to your child. Self monitor child has to be transitioned away from game. Child gets the sense of achievement and then moves away after you have given a warning. i.e. – at the end of that stage you ask to pause/turn it off. How long do you think that will be? After the child's estimated time you would say – ok, it's time now that we go outside and bring the washing in/bins in/ jump on the trampoline etc.

Choosing quality apps

How does a parent recognize the better quality apps?

Kate recommends looking at app reviews on sites, such as the non-profit Common Sense Media, where you can filter reviews based on a number of variables, including the skill the app develops. Apps that promote skills, such as "creativity" and "communication" are good to aim for. In general you can't go wrong with Apps produced by 'Shinny Things' or 'National Council of Mathematics'

"Co-play" or interact with your child as much as possible while having screen time. A little bit of digital babysitting is absolutely fine. But just like you don't leave your child totally alone in a real playground, don't leave them totally alone in the virtual playground. Really participate with your child to see what they're doing, learn how to play with them and talk to them about what you're both doing.

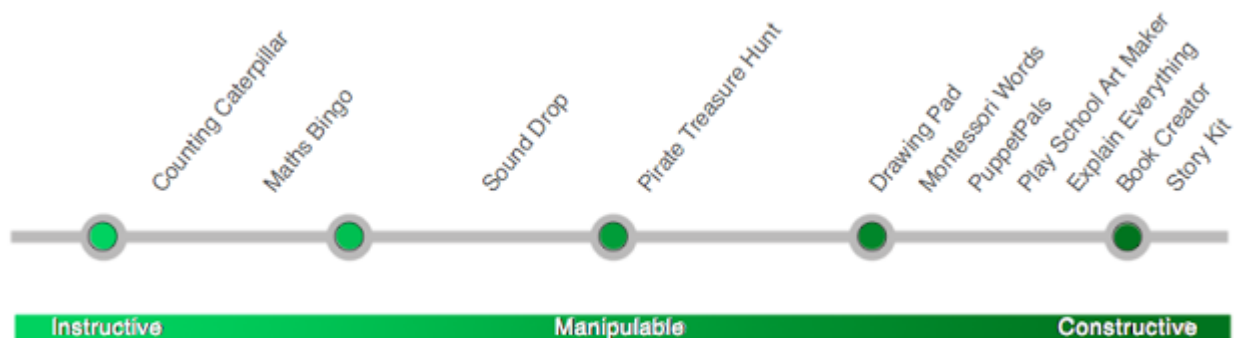
You need to know what habit of mind they're creating. For instance, apps that reward children every step of the way with enthusiastic phrases like "great job, well done" may set up unrealistic expectations about the level of reinforcement for any learning activity and you may want to limit these. Restrict apps that have a gambling resemblance in sound and reward. Remember to help your child keep a balance between learning in the digital world and learning in the real world. Too much time in the digital world is harmful to a child's development.

Be aware of advertising. Paid for games aren't advertising !

Be aware of aggressive behaviors - This is when the child is the shooter in the game killing people/objects. Often this aspect of a good app can be locked and not used

"If you're a parent who's engaged with your child's life, you're going to extend their learning quite naturally. Read good books [to, or with, your child]. Go on adventures. Have fun. Sometimes that can be digital fun, but it doesn't always have to be."

Kate suggested that we could plot apps on an educational continuum depending on where the different apps contribute to cognitive development. Three main categories along this continuum were identified; **Instructive, Manipulable, Constructive.**



Instructive Apps:

The first type of apps that were identified (Instructive) were those apps that were drill and practice. We have all used these types of apps, we start off quickly and are drawn into the gaming qualities of colourful visuals, a quick pace and repetitive music. These games can be fun but they have minimal cognitive investment from the student. They generally play them for 6 or 7 minutes and then move on to another game. These apps are useful for some students and for certain tasks.

Manipulable Apps:

The second category (Manipulable) are those apps that allow multiple responses to the app. Different responses can be made but really only from a specific set of variables. These apps are good but they require very little development of higher order thinking skills. These apps tend to be addictive because of the instant feedback and continued gratification. These apps have only minimal long term cognitive value.

Constructive Apps:

The category that Kate was most excited about was the last. These Constructive style apps allow a student to synthesis a learning object from scratch or build it freely from a range of available components. These types of apps create a high level of both cognitive involvement and cognitive development. Kate suggested that these apps actually have very limited extrinsic rewards and so the students are motivated not by feedback but rather by the challenge set by the app. These apps often have an open ended component to the structure of the activity and it is this open-endedness that allows for the deep cognitive development within task.

Selecting Apps:

So when we look at the app store, what type of apps are we going to offer our students? What type of learning do we aim to create with the use of technology? Can we actually provide deep cognitive development that is both differentiated and easily achievable?

Focus on quality Apps free of advertising. DR HIGHFIELD STRONGLY SUGGESTS NO MEDIA BEFORE SCHOOL FOR YEAR 3 AND UNDER.

Talk to your children about their Apps and keep the conversation going.

What apps fall into this Constructive category?

Kate provided a series of suggested apps. This is obviously not an exhaustive list but rather a series of suggested apps that allow student to make a substantial investment in the process of their own learning.



Drawing Pad: \$1.99 AU

Drawing Pad offers an incredible amount of fun and creativity. Drawing Pad lets you create drawings from a blank canvas or use the background library and accompanying objects. Let your students create scenes for storytelling or embellishing narratives. Drawing Pad is an "Apple Staff Favourite" and was featured in the "Spotlight" of the App Store.

<http://itunes.apple.com/au/app/drawing-pad/id358207332?mt=8>



PuppetPals: FREE

Create your own animated stories. Simply pick out the characters, drag them onstage and tap record. Movements and audio is recorded for your performance. If you get the Directors Pass you can act out a story of Pirates on the high seas, fight scary monsters or play the part of a wild west bandit.

<http://itunes.apple.com/us/app/puppet-pals-hd/id342076546?mt=8>



Sock Puppets: FREE

Sock Puppets lets you add Puppets, props, scenery, and backgrounds and start creating. Hit the record button and the puppets automatically lip-synch to your voice. Switch backgrounds to take your puppets to different places, move the puppets, props and scenery to animate them while recording. Cartoon and photo realistic puppets are included.

<http://itunes.apple.com/au/app/sock-puppets/id394504903?mt=8>



Artmaker: FREE – Great for Under 5

The Play School Art Maker app is a fun way for kids to create pictures, animated movies and story slideshows using the Play School toys and craft items. They can even add their own audio narration, upload their own photos as backgrounds, and save photos of their art. Play School Art Maker encourages imagination and creativity through open play.

<http://itunes.apple.com/au/app/play-school-art-maker/id473900831?mt=8>



StoryKit: FREE

Create an electronic storybook. Write some text, illustrate by drawing on the screen, tag a photograph or drawing on paper and then photograph the image. Sounds can be recorded for

narration or effects and the layout elements of your story can be dragged, pinch and altered with ease. This a great app for students to create books of their own narratives.

<http://itunes.apple.com/us/app/storykit/id329374595?mt=8#>



Explain Everything: \$2.99 AU

Explain Everything is an easy-to-use tool that lets you annotate, animate, and narrate explanations. You can create interactive lessons, activities, assessments, and tutorials using Explain Everything's flexible and integrated design. Use Explain Everything as an interactive whiteboard or insert a web browser for live annotations and basic recordings.

<http://itunes.apple.com/au/app/explain-everything/id431493086?mt=8>



Montessori Words: \$2.99 AU

Based on the proven Montessori learning method, Montessori Crosswords helps kids develop their reading, writing, and spelling skills by building words from a set of 320 word-image-audio-phonics combinations using a phonics-enabled movable alphabet. The app helps kids understand that words are made up of sounds or phonemes

<http://itunes.apple.com/au/app/montessori-learn/id384334005?mt=8>



Book Creator for iPad: \$5.49 AU

The simple way to create your own beautiful books right on the iPad. Read them in i-Books, send them to your friends or submit them as assignments. Ideal for students projects, picture books, art books, cook books, manuals, textbooks and the list go on. This is a great way for students to become content creators.

<http://itunes.apple.com/au/app/book-creator-for-ipad/id442378070?mt=8>

Other Apps:-

Puppet pals HD - primary school children

Year 1 - The Fantastic Flying Books of Mr. Morris Lessmore (Digital books are great for kids to demonstrate their skills through a reader - You can record your children)

Kindy/Year 1 - Word wizard App
My story (K-2)

Organizations skills - I thoughts HD App - mind mapping of ideas - fabulous for Upper primary and High school

Coming Life App - Mind map where they are going and what to do throughout the day

Pick-a-path Yrs 3-6 (mathematics)

Maths doodle

Lego movie App (make your own movie using your own lego characters.)

4th Grade

Star walk - science App

Monster physics App - Build constructions and add motors

Reading Eggs (Yr 4-6). Very good App and Australian made (ABC)

Creator verse App

Physics App

Special Need children - Social stories App

Hand Writing - Red Robbin App – Make sure it is NSW foundation font

Do not let them use their finger on the iPod - Get a stylus so they are practicing pencil grip at the same time (go to stylist.com.au).

Heads Up App (family game, digital version of celebrity head)

Nova elements (13+)

Pitch painter (music App for all ages)

garage band App

For further information see Common Sense Media site for parents www.commonsensemedia.org

If you like the sound of any of this you can follow Kate on Twitter or email her:-

1. Kateytwit (regular updates on good apps)
2. Kate.highfield@mq.edu.au (will try and get back to you but can be a delay depending on her work schedule.)

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