

LITTLE ONES

Their brain and media education

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INTRODUCTION

The theme of the Media Ukkie Dagen 2014: Are you raising your child, or are you allowing media to do it for you?

What can media wisdom professionals advise parents and pedagogical staff about the media education for the youngest group of children (0-6 years)? How can we make sure that our advice is in line with the experience of many parents, who often use media for young children as a 'pacifier'? Media as sugar: empty calories, without real nutritional value, which we would like to balance with media education. That is also the appeal made by the theme of the Media Ukkie Dagen: education is required as compensation. But to what end?

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"When you ask parents about it, they will say that tablets, media, mainly have an effect comparable to a pacifier."

Peter Nikken during the expert session Media Ukkies on February 17th 2014

It isn't clear yet what good advice concerning media and young children looks like. Should the advice focus on screen time, regardless of its contents? Or should it mainly focus on the contents of media products. Does media have any value whatsoever for young children? Is it good or not? Harmful or not? And what are the conditions for a good media education?

In this white paper we will discuss the main questions regarding the use of screens by little ones, with special focus on tablets/apps. We formulate a number of principles for giving advice regarding the media education of young children (0-6 years).

Are tablets harmful or beneficial to young children?

Recently, a discussion has been going on, sparked by the statement of Manfred Spitzer, who doesn't see anything positive in media for children up to the age of 6. In his opinion, the new media in particular (tablets) are a form of child abuse, especially because children are being confronted with it at such a young age. This early confrontation with media, could supposedly damage the young children's brain. Experts disagree on whether tablets – irrespective of their contents – are harmful and what this alleged harmful effect would comprise of and if it matters whether the child is two or four years old.

In addition, there are those who believe that playing with tablets can be a very educational experience. Therefore, a lot of the media for the little ones, is labeled as 'educational', which refers to school learning. But what can a child under 6 learn in terms of reading, writing and math, if it is not yet ready for it?

Parents and pedagogical staff are deemed to do what's best when it concerns the media education, but what is 'best' for media little ones, and

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"We should be extremely careful with the brain of young children"

what is that belief based on? A neutral view – tablets are good nor bad – seems to be impossible in this discussion. The views taken by scientists, are very diverse: from child abuse to educational. And this disagreement does not only exist in science, educational experts, pedagogical staff and parental support professionals are all having the same discussion. The same goes for families: roughly outlined, mothers detest the ‘addicted’ behavior of their children with regard to tablets, whereas fathers like the fact that their children – at such a young age – are interested in the same gadgets as them.

Experts seem to be able to defend both views: ‘the sooner they get the hang of it, the better’ versus ‘the later they are exposed to it, the better’. Where one expert says that children can learn a lot from it, others say that it inhibits a healthy development in children. This ambiguity makes it far from easy to establish unequivocal advice with regard to the media education of young children (0-6 years).

So it’s not the tablet in itself that is harmful or good – as far as we know now – but it is the way they are used in the live of a young child. Advice with regard to its use, should focus on:

1. The way screen media is used – so the question: how?
2. The selection of media products (apps) – so the question: what/which?

What should we know, in order to issue good advice?

To be able to establish good advice, we must know what it is that children from zero to six need to be able to develop, and what could harm them. What could inhibit healthy development, and what could have a stimulating effect, and what consequences does this knowledge have for interaction with media?

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"Why do babies crawl towards the iPad at lightning speed?"

A number of experts have united to answer these questions (February 17th 2014). This white paper contains the results of that meeting and forms the first, modest step towards informed advice regarding the media education of the youngest children (0-6 years old). In this, the focus is on the use of tablets (and apps) by children in this age group.

The expert meeting kicked off with a lecture of prof. Sieneke Goorhuis-Brouwer (orthopedagogue, specialized in language and speech disorders and the development of the young child 0-6 years); her substantiated vision that we need to be extremely careful with the brain of young children, was shared by virtually all attending experts in the field of the development of the young child. This caution has therefore been assumed as a principle in this.

What does a tablet have that other screen media doesn't have?

More so than the television, the tablet (such as the iPad) seems to have a huge appeal to very young children. The videos posted on YouTube by surprised, or maybe even proud parents, underline this. Their squealing children, preschoolers and toddlers are sometimes inconsolable if they can't play on the iPad for a second. Even babies can't resist the temptation: they crawl towards the iPad at lightning speed and fight about it with their older siblings. Why is that? What effect does that tablet have on the brains of young children?

When you hear some parents talk about the influence of the tablet in their families with young children, the media education often seems more like a way of wanting to prevent addiction, than like wanting to provide products that stimulate development.

We know that screen media, with all quick stimuli, mainly appeal to the right hemisphere: visual stimuli, spatial interpretations and emotions.

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'Lived experiences' are decisive for the brain development'

Young children mainly use that right hemisphere. Due to this, their brains are given strong reward stimuli if they are allowed to play with a tablet. It feels so pleasant that the child doesn't have attention for anything else. But this only benefits children this age when that pleasant experience is connected to activity in the more rational left hemisphere. This isn't an automatic process; this integration can be encouraged through language, by associating their experiences with words.

Principle

Media education is important in the use of screen media by young children. It must be focused on the integration of the right and left hemisphere. In practice, this means that media stimuli are pointless (like 'empty' sugar), as long as they are not connected to language and story.

How do we stimulate good development of the baby and toddler brain?

The first six years of our lives form the basis for the rest of our lives: everything you need, is created during that first period: the 'hardware' of the brain development. All children go through the same steps in the development of their motor skills, their mindset and language regardless of differences in their environment. There are differences in their pace of development however: each child has its own pace. The pace of development can only be affected to a limited extent; in that sense, children are much less 'malleable' than generally assumed. The brain develops automatically, under the right conditions, such as enough sensory experiences and human interaction.

Principle

The foundation for brain development is laid at a very young age through the sensory experiences in a three-dimensional world, via movement,

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'Babies need all of their awake time to learn how to relate to the physical world'

listening and human interaction. The brain develops itself based on this input, that needs to be processed. These so-called 'lived experiences' are decisive for the brain development: their effects last a lifetime.

Do tablets/apps affect the brain development of babies (0-2 years old)?

Because a screen doesn't appeal to all senses, a tablet cannot provide the same lived experiences, meaning that a tablet in itself does not provide a young child with any added value. As far as we know at this point, the use of a tablet isn't harmful either – it won't hurt anyone to play on the iPad a couple of minutes. The main concern in this is the time associated with it. Experts are worried that, in practice, it doesn't stop at a couple of minutes every now and then, and that the media consumption could inhibit proper development. Because babies (0-2 years old) need all of their awake time to learn how to relate to the physical world. If too much of that time is used for screen media, this may compromise their brain development.

This biological argument is important. We don't know exactly what change in our brains is caused by tablets, but it is generally believed that there is a consequence. It may be possible that – in time – we will observe that the use of tablets teaches young children something that generations before them didn't learn. But it is impossible to estimate the gain at this point, let alone to assume that it outweighs the possible loss of brain development. Since these young years are so fundamental for a full-fledged development, caution and more research on this topic is desired.

Principle

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*'The label
'educational' can be
meaningless'*

Babies (0-2 years old) do not benefit from screen media and may even suffer damage in their brain development. Up to the age of 2, the use of tablets and television has no added value: use them as little as possible.

When is an app 'educational' for young children?

In television shows, parents are often quickly able to determine which media products are meant for the young ones (0-6- years old): the programming of a professional selection helps in this. Without doing much research, parents are able to determine whether the show is intended for young children. The global supply of apps however, is huge, and it proves to be much more difficult for parents to make a suitable selection for a child, than it is in television shows or films. The contents and quality thereof is hard to assess in advance: you must first download an app and 'play' it yourself, to be able to really assess it.

The result is that parents depend on information from others about the app. The label 'educational' for instance, which is often slapped on to an app by its creators, instantly seems to be a recommendation. But not rightly so. For the group of children who are not yet ready for school learning (up to the age of 6), the label 'educational' is meaningless. A child will not be ready to be a student until the 'hardware' (in the brains) is ready. This moment comes around the age of 6 (in the 3rd grade). Only then, are educational skills (letters and reading, figures and math) useful. Until then, investing in that is a waste of energy; investing in playing, motor skills, physical interaction with the world, interaction with people and telling stories, is much more useful. By doing that, they learn the skills they need for the rest of their development.

In other words, every claim that screen media at this age stimulates or support school learning at this age, is premature, undesirable, and must be considered with great suspicion. The use of the label 'educational' is

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'Apps should not replace the paper book'

not a recommendation for babies, toddlers and preschoolers, and should therefore be avoided.

Of course, screen media can be great for children age 2 and up. Mainly if a child interacts with this media together with an adult. In this, fun is paramount, which is immediately connected to the interaction between the adult and the child. Mainly the parent's use of language is essential in this: if not accompanied by language, media has no added value whatsoever at this age.

Principle

For children from 2 – 6 years old the use of screens can hardly be called 'educational': it creates an unsubstantiated link to the type of learning one does in school, which may mislead parents.

How can the use of a tablet be harmful for young children?

Screen media, tablets and television must be used in moderation by children up to the age of 6, because it might inhibit the proper development of the child. The growth of young brains is stimulated through interaction with the physical world, via their senses and the interaction with other people.

The development of young children is mainly stimulated by means of playing, musical and literary experiences (integration of the right and left hemisphere). The role of the story is crucial in this. Reading them a story is important, which can also be done using a digital picture book (via an app). But apps should not replace the paper book, because both forms of media provide a different kind of experience: apps don't engage them in the story as much. They remember less and miss details, probably because

the form (the technology) to which much of the linguistic interaction refers ('now tap this') distracts them too much.

When screen media is used by young children without supervision, without human, linguistic interaction, and only as a pastime, it is only an activity of the right hemisphere. If this hemisphere is the only one used, we expect children to be more likely to develop 'addictive' behavior.

Principle

Paper books to read from, should never be replaced entirely by electronic books (apps), as long as the form poses too much of a distraction from the story. When digital picture books are used, it is important to also read from paper books from time to time.

When is an app suitable for young children?

Screen media for young children have little added value. They are suitable (not harmful) when they are used properly. This means that:

- they consume limited time;
- they are used in interaction with an educator who assists the child in its experience with language;
- they are considered to be appealing ('fun') by both the educator and the child;
- they are in line with the development and attention level of the child;
- they make a connection to experiences in daily life;
- they invite the educator to participate, in doing so, stimulating interaction.

Principle

It is important to carefully pick the apps for young children. The main criterion is not whether the app is 'educational', but whether the educator and the child enjoy the app, causing them to be encouraged to talk about what they see and do together.

Read more

- App Noot Muis, see www.appnootmuis.nl
- Martine Delfos, In 80 dagen de virtuele wereld rond (SWP, 2012), see www.80dagenwereldrond.nl
- O4NT manifest, zie http://o4nt.nl/wp-content/uploads/2013/01/o4nt_manifest.pdf
- Peter Nikken e.a., Speel Digiwijs! Samen aan de slag met media voor jonge kinderen (Zwijsen, 2013)
- Remco Pijpers, Iene Miene Media 2012 (Mijn Kind Online, 2012) <http://mijnkindonline.nl/publicaties/onderzoeksrapporten/iene-miene-media-2012>
- Remco Pijpers, Iene Miene Media 2013 (Mijn Kind Online, 2013) <http://mijnkindonline.nl/publicaties/onderzoeksrapporten/iene-miene-media-2013>
- Manfred Spitzer, Digitale Dementie (Atlas Contact, 2013)
- Dossier Media Education: www.nji.nl/mediaopvoeding (background information about media and upbringing)
- Onderzoekscentrum Jeugd en Media, UvA Amsterdam: www.ccam-ascor.nl/nl/2013-11-18-13-57-45/nederlandse-publicaties/ccam-kennis (accessible summaries of study)
- BiteScience: www.bitescience.com/ (English summaries of all kinds of studies)



Websites

- www.mediaukkie.nl (also see information about the Media Ukkie Award – prize for the best children’s app)
- www.digidreumes.nl (app reviews and information for pedagogical staff)
- www.mediasmarties.nl (find suitable children’s media)
- www.snugger-app.nl (app with suitable children’s media)
- www.mijnkindonline.nl/artikelen/hoe-vind-ik-een-geschikte-app (how do I find a suitable app? With references to the app brochures of Mijn Kind Online/Kennisnet)
- www.mediaopvoeding.nl (information center for parents and educators)

Participants Expert meeting February 17th 2014

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- Stichting Kennisnet;
- het Sectorinstituut Openbare Bibliotheken (SIOB);
- het Nederlands Instituut voor Beeld en Geluid;
- ECP, platform for the Information Society.

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