Digital Media
and Child Development
or why Digital Natives think different
Negative Associations

“I Am the Internet hurting children?“

“Addicted to Computers? Children in the Maelstrom of Modern Media”  (translation of a German book title)

“Do video games cause ADHD - or vice versa?”
Audio
Video
What is Digital Media?

Audio — Images — Video

in a computer-readable format

- on a local device (CD, DVD, hard drive)
- remote location (website)
What is a 'Child'?

[...] every human being below the age of 18 years unless, under the law applicable to the child, majority is attained earlier.
What is a ‘Child’?
Personal Computer

One or more computers with internet access

2012: 96 %
2000: 27 %

Own Computer

21 %
14 %
Frequency of Use (2012)

- (almost) every day: 37% (2000)
- once or several times a week: 49% (2000)
- infrequent: 14% (2000)
Use of Digital Media (in min)

<table>
<thead>
<tr>
<th>Age</th>
<th>GAMES</th>
<th>COMPUTER (incl. Internet)</th>
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</thead>
<tbody>
<tr>
<td>6</td>
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</table>
How Internet works

random and constant access

social media
chat
video post
friend 1
friend 2

music
information

navigating active and self-determined
What effects does this have?

- random and constant access to wisdom
  - longterm-memory seems not necessary

- parallel processing of information
  - short attention spans

- active gaming/surfing vs. passive school lesson
How School works

- Lesson 1
- Lesson 2
- Lesson 3
- Lesson 4
- Exam

Access through teacher

Passive access through long-term memory
<table>
<thead>
<tr>
<th>Digital Media</th>
<th>vs.</th>
<th>School lesson</th>
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</thead>
<tbody>
<tr>
<td>active</td>
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<td>passive</td>
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<td>self-determined</td>
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<td>guided</td>
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<td>parallel perception</td>
<td></td>
<td>linear perception</td>
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<tr>
<td>linked information</td>
<td></td>
<td>long-term memory required</td>
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<tr>
<td>fast success</td>
<td></td>
<td>slow success</td>
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</tbody>
</table>
Digital Natives think different...

“Different kinds of experiences lead to different brain structures.“

- Digital Immigrants: trained for passive, linear learning

- Digital Natives: trained for active, parallel processing
Digital Natives think different…

- Education system made by Digital Immigrants

  Discrepancy between the 2 learning processes

RESULT:
- distrust towards Digital Media by Digital Immigrants
- Digital Natives struggle in school
Learning revolution

Learning through Digital Media works for Digital Natives

but it’s the opposite of traditional education

Proposes: Combination of Entertainment and Learning Games

→ Digital Game-Based Learning
... but feel the same.

What do you think is each one's favorite occupation?

Thank you for your attention!
References

Bergmann; Hüther: Computersüchtig: Kinder im Sog der modernen Medien. Walter-Verlag; 3. Auflage (September 2006)


References

