<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>The Impact of Out-of-School IT and Media Use on ICT in Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Author(s)</strong></td>
<td>Looms, PO</td>
</tr>
<tr>
<td><strong>Citation</strong></td>
<td>Seminar on &quot;The Impact of Out-of-School IT and Media Use on ICT in Education&quot;, Hong Kong, China, 24 June 2003</td>
</tr>
<tr>
<td><strong>Issued Date</strong></td>
<td>2003</td>
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<tr>
<td><strong>URL</strong></td>
<td><a href="http://hdl.handle.net/10722/44088">http://hdl.handle.net/10722/44088</a></td>
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<tr>
<td><strong>Rights</strong></td>
<td>This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.</td>
</tr>
</tbody>
</table>
The Impact of Out-of-School IT and Media Use on ICT in Education

Peter Olaf Looms
Before we start a quick poll

- Which of the following do you currently have access to at home?

  - games console
  - mobile phone
  - PC with Internet
10 years ago

• Which of the following did you have access to at home in June 1993?

  - games console
  - mobile phone
  - PC with Internet
Purpose of quiz

The figures give you a sense of
• the speed or slowness with which change is happening
• Whether a given device has (or will) become ubiquitous

- games console
- mobile phone
- PC with Internet
Inputs from Hong Kong...
Sorry, Billy, but that's a part of life! You have to learn to be a good sport. Don't be a sore loser.
Here's What REALLY Happened! by Billy

I win again, Daddy! That's FOUR in a row!

Boo! I quit! I've got more important things to do than play dumb games!
Soccer gambling discussions for schools criticised

One legislator says it sounds like betting among students is being promoted

Carrie Chan

Schoolchildren as young as eight will be taught about soccer gambling under a government proposal revealed yesterday that one leading educator warns is paving "all the inflammable materials".

Principal Assistant Secretary for Home Affairs Esther Leung Yuet-yin told the Legislative Council that teachers would be encouraged to introduce the topic of soccer gambling to students from Form Three. Information for teachers would soon be available on an education website.

Peter Tsang Siu-hung, chairman of the Primary Education Research Association, said the government’s proposal to legalise soccer betting could be described as “fanning a fire” – a blaze teachers would be left to extinguish.

He said teachers were facing the challenge of understanding the scope of the stories to focus on more than just cases of soccer betting, to show the problems of gambling. He said, "It would be a valuable exercise to stimulate students into analysing why there is such controversy over soccer betting, and to initiate rational discussion in classes."

Meanwhile, Deputy Secretary for Home Affairs Stephen Fisher unveiled more details in the Legislative Council yesterday of how soccer betting would be operated. He said betting centres would be open after school hours.
HKISPA launch content rating

Jointly operated by HKISPA and Television and Entertainment Licensing Authority with the aim to:
- Protect children from potentially harmful materials on the Internet
- Protect freedom of speech on the Internet

Click here for more details...
Who I am and what I do

• Full-time consultant at public service broadcaster DR - “to inform, educate and entertain”

• Strategy, market and technology, mainly digital TV and broadband

• Teach postgrad courses in format development and strategic issues related to digital content
  - the IT-University Copenhagen
  - the University of Hong Kong
Three questions

1. What do we know about out-of-school “media use” by our current and future students?

2. What impact does this have on the cognitive and affective development of our students?

3. What are the implications of out-of-school media use for educational policy and practice?
What do we know about out-of-school "media use" by our current and future students?
What do we mean by “media”?

- **Watching** – a physically passive style of media consumption covering television and time-shifted viewing, VHS and DVD, Pay Per View and Video On Demand

- **Playing** – a more active type of media generally bought in units rather than subscriptions and including console games and recorded music

- **Connecting** – usage involving peer-to-peer or peer-to-group communication and information covering SMS, MMS, e-mail, the Web and services such as ICQ and MSN Messenger on the Web, mobile devices and digital television

- **How many hours did you spend on these three last week?**
What do we spend time and money on?

Time consumption (hours/week)
- Watching: 9.2
- Playing: 18.2
- Connecting: 23.8

Money consumption (USD/week)
- Watching: 6.5
- Playing: 2.3
- Connecting: 0.7

Source: Henley Centre, SIS Briefings 50, July 2002, EBU Geneva Switzerland
When do watch, play and connect?

A 24-hour cycle

Intensity

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

0.1 1.2 2.3 3.4 4.5 5.6 6.7 7.8 8.9 9.10 10.11 11.12 12.13 13.14 14.15 15.16 16.17 17.18 18.19 19.20 20.21 21.22 22.23 23.24

Internet  Teletext  RADIO  TV
What about kids? Are they different?
What about kids? Are they different?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Media consumption by users</th>
<th>Mean media consumption by all 9-16 year-olds</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entertainment media</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching television</td>
<td>2:36</td>
<td>2:33</td>
</tr>
<tr>
<td>Watching video</td>
<td>0:49</td>
<td>0:44</td>
</tr>
<tr>
<td>Playing computer games</td>
<td>0:59</td>
<td>0:45</td>
</tr>
<tr>
<td>Playing with video consoles</td>
<td>0:48</td>
<td>0:25</td>
</tr>
<tr>
<td>Playing Gameboy at home</td>
<td>0:16</td>
<td>0:05</td>
</tr>
<tr>
<td><strong>Other entertainment media</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening to tapes, CD’s or records</td>
<td>1:27</td>
<td>1:24</td>
</tr>
<tr>
<td>Listening to the radio</td>
<td>0:58</td>
<td>0:43</td>
</tr>
<tr>
<td>Reading a cartoon series</td>
<td>0:16</td>
<td>0:11</td>
</tr>
<tr>
<td><strong>Informative media</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using a computer &amp; games</td>
<td>0:26</td>
<td>0:17</td>
</tr>
<tr>
<td>Using a computer at home</td>
<td>0:53</td>
<td>0:43</td>
</tr>
<tr>
<td>Reading a book (not school books)</td>
<td>0:21</td>
<td>0:17</td>
</tr>
<tr>
<td>Reading a magazine</td>
<td>0:13</td>
<td>0:11</td>
</tr>
<tr>
<td>Reading a newspaper</td>
<td>0:08</td>
<td>0:05</td>
</tr>
<tr>
<td><strong>Communication media</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calling someone on the phone</td>
<td>0:14</td>
<td>0:13</td>
</tr>
<tr>
<td>Using the Internet on one’s own</td>
<td>0:16</td>
<td>0:10</td>
</tr>
<tr>
<td>Using the computer at home</td>
<td>0:53</td>
<td>0:43</td>
</tr>
</tbody>
</table>

Source: Drotner (2001) Figures for Danish children

N=1.175
Research from May 2003

Risk behaviour among 9-16 year olds in Denmark, Finland, Iceland, Norway, Sweden...
...and Ireland
Project information

• Main objective: Map children’s risk behavior on the Internet in Norway, Sweden, Denmark, Iceland and Ireland
• Target group: Children between 9-16 years
• Method: Self-completed questionnaires in classroom situation
• Period of data collection: Ultimo January – Primo March 2003
• No of interviews: Total 4700 interviews, 1000 interviews in NOR, SE, DK and ICE, 700 interviews in IRE
• Weights: The results are weighted according to national gender and age. Population distribution is collected from official statistics
Q: 11 Do you or anyone else in the family have a PC/computer that you can use at home?

Filter: Use PC

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes, I have my own PC</th>
<th>Yes, I can use another PC at home</th>
<th>No, I have no access to any PC at home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>38%</td>
<td>57%</td>
<td>5%</td>
</tr>
<tr>
<td>Sweden</td>
<td>33%</td>
<td>64%</td>
<td>3%</td>
</tr>
<tr>
<td>Denmark</td>
<td>50%</td>
<td>46%</td>
<td>3%</td>
</tr>
<tr>
<td>Iceland</td>
<td>32%</td>
<td>65%</td>
<td>3%</td>
</tr>
<tr>
<td>Ireland</td>
<td>27%</td>
<td>65%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Q: 13 Do you have an Internet connection at home? Yes

Filter: Have PC at home

- Norway: 73%
- Sweden: 87%
- Denmark: 77%
- Iceland: 85%
- Ireland: 80%

www.saftonline.dk
Kids and adolescents use the Net for many things

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage of Internet users (9-16) who have done X at least once</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playing games on the Internet</td>
<td>71%</td>
</tr>
<tr>
<td>Sending and receiving e-mails</td>
<td>50%</td>
</tr>
<tr>
<td>Doing homework (9-12 year olds)</td>
<td>28%</td>
</tr>
<tr>
<td>Doing homework (13-16 year olds)</td>
<td>67%</td>
</tr>
<tr>
<td>Getting information other than for homework on the Web</td>
<td>50%</td>
</tr>
<tr>
<td>Surfing for fun</td>
<td>39%</td>
</tr>
<tr>
<td>Visiting fan sites</td>
<td>32%</td>
</tr>
<tr>
<td>Chatting (9-12 year olds)</td>
<td>28%</td>
</tr>
<tr>
<td>Chatting (13-16 year olds)</td>
<td>68%</td>
</tr>
<tr>
<td>Downloading music</td>
<td>31%</td>
</tr>
<tr>
<td>Visiting hobby websites</td>
<td>24%</td>
</tr>
<tr>
<td>Making their own websites</td>
<td>18%</td>
</tr>
<tr>
<td>Using instant messaging (MSN, ICQ etc.)</td>
<td>12%</td>
</tr>
<tr>
<td>Downloading software</td>
<td>10%</td>
</tr>
<tr>
<td>Visiting news sites</td>
<td>9%</td>
</tr>
<tr>
<td>Buying things on the Net (!)</td>
<td>7%</td>
</tr>
</tbody>
</table>
Q: 18 What kind of things do you do on the Internet?

Filter: Use Internet

<table>
<thead>
<tr>
<th>Activity</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Playing games on the Internet</td>
<td></td>
<td>Playing games 66%</td>
</tr>
<tr>
<td>Sending and receiving e-mail</td>
<td>58%</td>
<td>Download music 49%</td>
</tr>
<tr>
<td>Downloading music</td>
<td>43%</td>
<td>Surfing for fun 45%</td>
</tr>
<tr>
<td>Surfing for fun</td>
<td>34%</td>
<td>Download software 25%</td>
</tr>
<tr>
<td>Doing homework</td>
<td></td>
<td>Sites for hobbies 23%</td>
</tr>
<tr>
<td>Getting information other than for school work</td>
<td></td>
<td>Watching porno 15%</td>
</tr>
<tr>
<td>Chatting in chat rooms</td>
<td></td>
<td>Personal websites 12%</td>
</tr>
<tr>
<td>Visiting fan sites</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Visiting sites for hobbies (knitting, cats, model airplanes, etc.)</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>Using Instant Messaging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downloading software</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Factors above 15%

- E-mail
- Homework
- Information
- Fan sites
- Chatting in chat rooms
- Visiting fan sites
- Visiting sites for hobbies (knitting, cats, model airplanes, etc.)
- Using Instant Messaging
- Downloading software
Q: 28 Which of these are your 3 main ways in looking for information when doing homework?

Filter: Use Internet

- Books from school: 42%, 42%, 33%, 39%, 28%, 25%, 16%, 10%, 5%, 3%
- Internet websites: 55%, 63%, 55%, 48%, 39%, 28%, 23%, 19%, 13%, 7%
- Books from a public library: 63%, 55%, 55%, 48%, 39%, 28%, 23%, 19%, 13%, 7%
- Books from home: 41%, 41%, 39%, 39%, 28%, 25%, 23%, 19%, 13%, 7%
- CD or DVD ROM: 4%, 4%, 4%, 4%, 4%, 4%, 4%, 4%, 4%, 4%
- Internet News: 9%, 13%, 13%, 13%, 13%, 13%, 13%, 13%, 13%, 13%
- Magazines (that are not on the Internet): 8%, 8%, 8%, 8%, 8%, 8%, 8%, 8%, 8%, 8%
- Video tapes: 3%, 3%, 3%, 3%, 3%, 3%, 3%, 3%, 3%, 3%
- SMS Chat: 2%, 2%, 2%, 2%, 2%, 2%, 2%, 2%, 2%, 2%
- Internet Chat: 7%, 7%, 7%, 7%, 7%, 7%, 7%, 7%, 7%, 7%
- Other ways: 4%, 4%, 4%, 4%, 4%, 4%, 4%, 4%, 4%, 4%
- Do not know: 14%, 14%, 14%, 14%, 14%, 14%, 14%, 14%, 14%, 14%
Q: 25 Do you ever do anything to confirm that the information you find on the Internet is true and can be trusted?

Filter: Use Internet

- Norway: 25% Yes, 44% No, 31% Do not know
- Sweden: 15% Yes, 65% No, 20% Do not know
- Denmark: 31% Yes, 39% No, 29% Do not know
- Iceland: 26% Yes, 51% No, 23% Do not know
- Ireland: 24% Yes, 55% No, 19% Do not know
Q: 30 How much do your and your parents talk about what you do on the Internet?
A great deal / a fair bit

Filter: Use Internet

<table>
<thead>
<tr>
<th>Country</th>
<th>Mother</th>
<th>Father</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>35</td>
<td>32</td>
</tr>
<tr>
<td>Sweden</td>
<td>31</td>
<td>28</td>
</tr>
<tr>
<td>Denmark</td>
<td>38</td>
<td>34</td>
</tr>
<tr>
<td>Iceland</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>Ireland</td>
<td>29</td>
<td>24</td>
</tr>
</tbody>
</table>

www.saftonline.dk
Q: 34 Which of the following rules for Internet are in use in your home?

Filter: Go on Internet at home

- I am not allowed to give out any personal information
- I am not allowed to meet in person someone I only know from the Internet
- I am not allowed to visit certain sites
- I have rules about how much time I am allowed to spend on the Internet
- I have to tell my parents if I find something on the Internet that makes me feel uncomfortable
- I am not allowed to talk to strangers in chat rooms

Rules top 6

- Norway
- Sweden
- Denmark
- Iceland
- Ireland

www.saftonline.dk
Q: 39 Have you ever met someone new on the Internet who asked for your personal information?

Yes

Filter: Use Internet

- Norway: 39%
- Sweden: 36%
- Denmark: 39%
- Iceland: 30%
- Ireland: 19%
The Net generation sub-culture - A first attempt to understand it

- Kids by and large have their own Net culture
- The Net is the current toy and medium for experiences, entertainment, communication and network building [in Denmark coupled with the mobile phone]
- The transition from childhood to adulthood involving experimentation, breaking new ground and breaking taboos currently takes place [primarily] on the Net
- The home, school and out-of-school clubs have become transparent areas where adults observe and engage in dialogue with children on equal terms
The Net generation sub-culture - A first attempt to understand it

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- The transition from childhood to adulthood involving experimentation, breaking new ground and challenging taboos currently takes place [primarily] on the Net
- The home, school and out-of-school clubs have become transparent areas where adults observe and engage in dialogue with children on equal terms

[comments]
The Future of the Protection of Minors - Attitudes and Possible Action

4 components:
- Protect minors from media
- Satisfy kids’ need for quality media
- Participate in kids’ activities using media
- Bring children up to relate to media
Kids most frequently learn about the Net from:

- Peers - friends, schoolmates (53%)
- Parents (38%)
- Trial and error (34%)
- Their teachers (23%)
- Older siblings (21%)
- Websites (8%)
- Libraries (7%)
- Chat pal (7%)
- Magazines (5%)
Q: 86 Have you had any education in school regarding use of Internet?

Filter: Total

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes, regularly</th>
<th>Yes, a few times</th>
<th>Very little</th>
<th>No</th>
<th>Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>7 %</td>
<td>28 %</td>
<td>26 %</td>
<td>25 %</td>
<td>14 %</td>
</tr>
<tr>
<td>Sweden</td>
<td>8 %</td>
<td>25 %</td>
<td>25 %</td>
<td>31 %</td>
<td>17 %</td>
</tr>
<tr>
<td>Denmark</td>
<td>11 %</td>
<td>26 %</td>
<td>28 %</td>
<td>23 %</td>
<td>16 %</td>
</tr>
<tr>
<td>Iceland</td>
<td>15 %</td>
<td>33 %</td>
<td>27 %</td>
<td>19 %</td>
<td>10 %</td>
</tr>
<tr>
<td>Ireland</td>
<td>15 %</td>
<td>27 %</td>
<td>25 %</td>
<td>24 %</td>
<td>9 %</td>
</tr>
</tbody>
</table>

Legend: 
- Yes, regularly
- Yes, a few times
- Very little
- No
- Do not know
Q: 87 What was the education about?

Filter: Have had education in school regarding Internet use

- How to connect Internet
- Instructions on safe use of Internet, like filters or awareness sites
- What is illegal to do
- How to find out if information on Internet is to be trusted
- How to avoid things you do not want
- How to use and behave in chatrooms
- How to behave in e-mails, on bulletin boards, etc.
- How to be aware of people or companies wanting to sell you things
- How to get a free e-mail account
- Other things

Norway, Sweden, Denmark, Iceland, Ireland

www.saftonline.dk
• Information and Communication Technologies now widely available
• Children and adolescents heavy users of a wide range of ICT and traditional media out of school
• ICT use in school outshadowed by what goes on outside (quantitatively, in some respects qualitatively)
• This has all taken place *in less than a decade*
• Narrative appeal of television and electronic games at the expense of the book
What impact does this have on the cognitive and affective development of our students?
A good research summary...
Motivation and learning

FIFA 2003
Robin Hood: The Legend of Sherwood
Neverwinter Nights
Jeopardy! 2003

Publisher: Infogrames
Developer: Infogrames
Genre: Puzzle
Release Date: 10/09/2003

If you can get past the lackluster presentation, irritating pauses, and low-quality video, you may find Jeopardy! 2003 to be a surprisingly challenging and enjoyable pastime.
- Andrew Park  FULL REVIEW

THE ENDLESS HOURS OF THE SIMS ONLINE
“The software induces conditions within the players which encourage them to continue their involvement with their role as game player.

Such conditions include satisfaction, desire, anger, absorption, interest, excitement, enjoyment, pride in achievement, and the (dis)approbation of peers and of others.

It is in provoking and harnessing some of these emotions and their consequences that games software might benefit education.”

BECTA 2002
What does research tell us? 1/3

• Review of 60 scientific studies published in English or European languages.
• Unable to draw any general conclusions about negative social behaviour.

• Neurophysiological studies suggest that dopamine releases have an impact on learning and games develop eye-hand coordination (Koepp, M.J. et al [1998]), (Kawashima [2001])
“Nearly every study suffers from unclear definitions (of violence or aggression), ambiguous measurements (confusing aggressive play with aggressive behaviour) or using questionable measures of aggression, such as blasts of noise or self-reports of prior aggression) and overgeneralizations from the data…

In reality, a game player chooses when and what to play, and enters into a different state of mind than someone who is required to play on demand”.

Goldstein [2000]
What does research tell us? 3/3

Examples of Danish research in this field (published in English)


8. Sørensen, Birgitte Holm 2000: **Chat and Identity - Playing with the Forms of Chat.** Paper. Forum of Youth and Media Research, Sydney 26-29 November


Conclusion: Out-of-school media use has a variety of learning outcomes about which we still know too little.
What are the implications of out-of-school media use for educational policy and practice?
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>60-65</td>
<td>4,552</td>
<td>4,948</td>
<td>5,087</td>
<td>6,762</td>
<td>60-65</td>
<td>5,309</td>
<td>5,671</td>
<td>5,670</td>
<td>6,086</td>
</tr>
<tr>
<td>55-59</td>
<td>5,361</td>
<td>5,004</td>
<td>6,461</td>
<td>8,741</td>
<td>55-59</td>
<td>6,024</td>
<td>5,470</td>
<td>6,992</td>
<td>8,101</td>
</tr>
<tr>
<td>50-54</td>
<td>5,616</td>
<td>5,521</td>
<td>8,577</td>
<td>10,082</td>
<td>50-54</td>
<td>6,136</td>
<td>5,848</td>
<td>9,049</td>
<td>9,578</td>
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<td>45-49</td>
<td>5,428</td>
<td>6,779</td>
<td>9,856</td>
<td>11,264</td>
<td>45-49</td>
<td>5,765</td>
<td>7,045</td>
<td>10,202</td>
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<tr>
<td>40-44</td>
<td>5,592</td>
<td>9,780</td>
<td>11,293</td>
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<td>40-44</td>
<td>5,850</td>
<td>9,014</td>
<td>11,473</td>
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<tr>
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<td>6,640</td>
<td>9,904</td>
<td>10,956</td>
<td>10,155</td>
<td>35-39</td>
<td>6,890</td>
<td>10,078</td>
<td>11,087</td>
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<td>30-34</td>
<td>8,260</td>
<td>10,905</td>
<td>9,674</td>
<td>9,436</td>
<td>30-34</td>
<td>8,476</td>
<td>11,008</td>
<td>9,890</td>
<td>9,146</td>
</tr>
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<td>25-29</td>
<td>9,499</td>
<td>10,658</td>
<td>8,769</td>
<td>9,207</td>
<td>25-29</td>
<td>9,632</td>
<td>10,578</td>
<td>8,855</td>
<td>9,144</td>
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<tr>
<td>20-24</td>
<td>10,515</td>
<td>9,746</td>
<td>9,531</td>
<td>9,889</td>
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<td>9,205</td>
<td>9,263</td>
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Sources: Brown, Alex; Deusche Bank/Census Bureau in Koffler [2002]
Games - annual revenues 2002

The Economist, Console Wars 20 June 2002


University of Hong Kong 24 June 2003 © Peter Olaf Looms
Games - annual revenues 2006

<table>
<thead>
<tr>
<th>Category</th>
<th>Revenue (USD)</th>
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<td>iTV Games</td>
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<td>Internet MOG</td>
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<td>Online console</td>
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<td>Broadband streaming/downloads</td>
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<td>Mobile</td>
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Total: 6,350 million USD


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Is interactivity on the increase?

Consumption of interactive and normal television in Europe

![Graph showing the consumption of interactive and normal television in Europe from 2000 to 2010. The graph indicates a decrease in the consumption of linear broadcast and an increase in the use of interactive services.]

Ongen [2001]

University of Hong Kong 24 June 2003 © Peter Olaf Looms
Conclusions:

- Out-of-school media use has changed rapidly and will continue to evolve as digitalisation, convergence and IP lead to ubiquitous and persuasive computing (Wolf in Sheep’s Clothing)
- ICT in education policy would benefit from further studies of out-of-school media use both as a social phenomenon and for possible synergies between education and the outside world
Conclusions:

- A realistic policy regarding protection of minors from offensive and violent content cannot be based on filtering and content rating alone.
- Education and the teaching of ethics could well play a crucial, complementary role (if understood/accepted by government)
- Parents still have responsibilities towards their children
- Educational use of games and simulations should be aware of the external yardstick - professional, seductive productions from the entertainment industry
Thank you!