'Digital Natives' and Online Information Resources: How They Search and What We Offer

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Overview

- **The media worlds of the so-called 'Digital Natives'**

- **How they search for information**

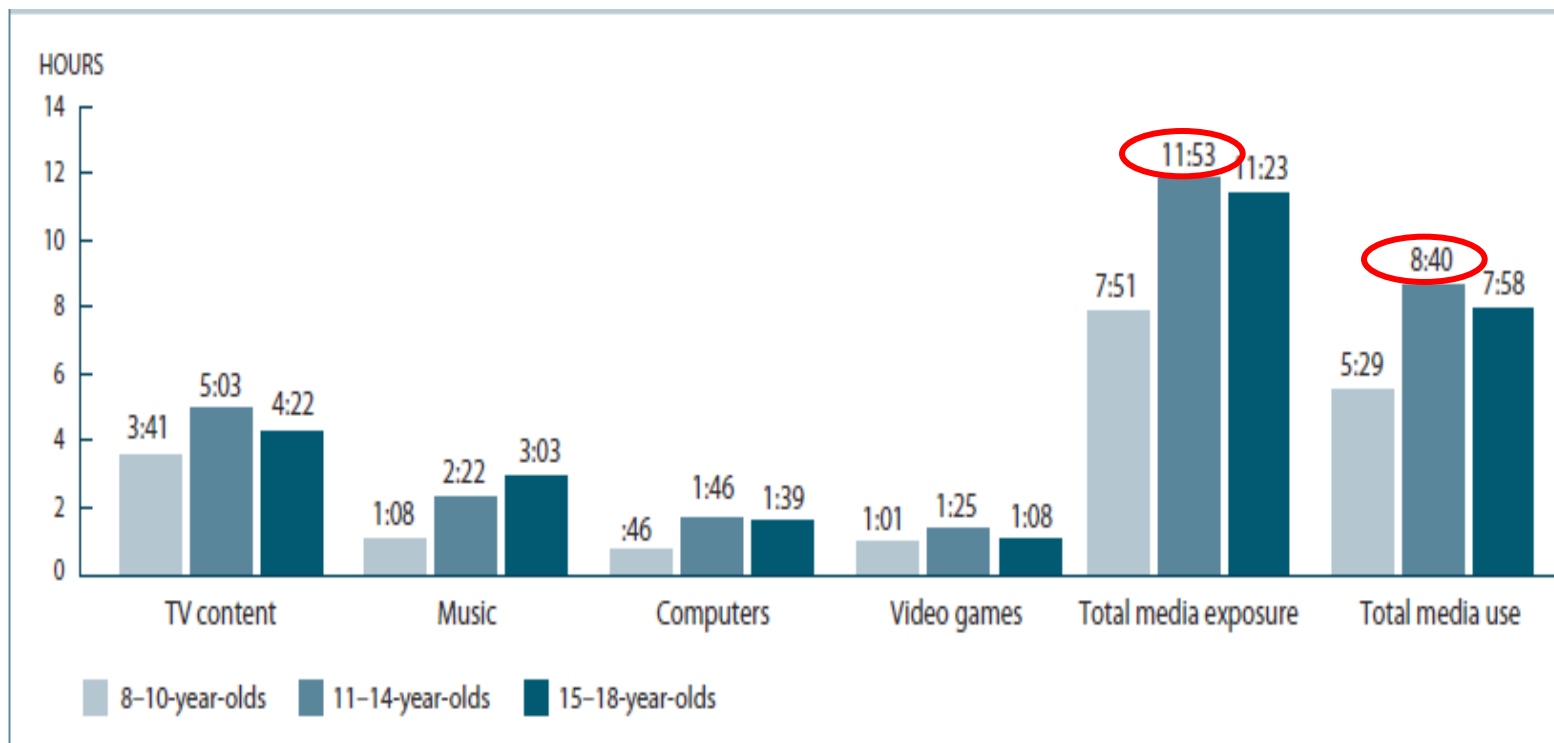- **Room for improvement: 'Digital Natives' and libraries**

Media use, importance and image of media:
Selected results from youth media research studies

Media use, by age

HOURS

	TV content	Music	Computers	Video games	Total media exposure	Total media use
8–10-year-olds	3:41	1:08	:46	1:01	7:51	5:29
11–14-year-olds	5:03	2:22	1:46	1:25	11:53	8:40
15–18-year-olds	4:22	3:03	1:39	1:08	11:23	7:58

Media use:
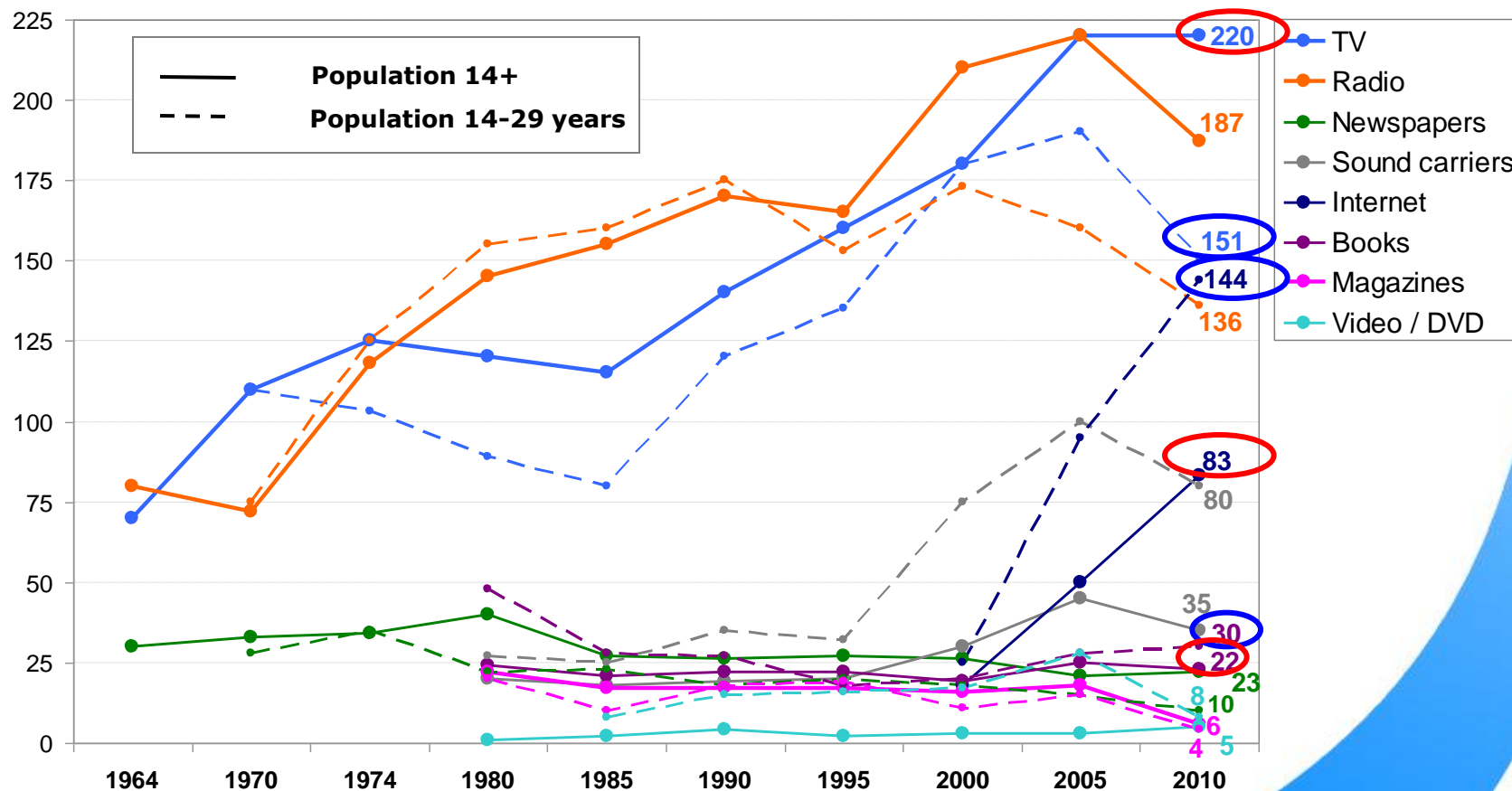## Comparison age groups 14+ and 14- to 29-year-olds

Time spent per day (hours)
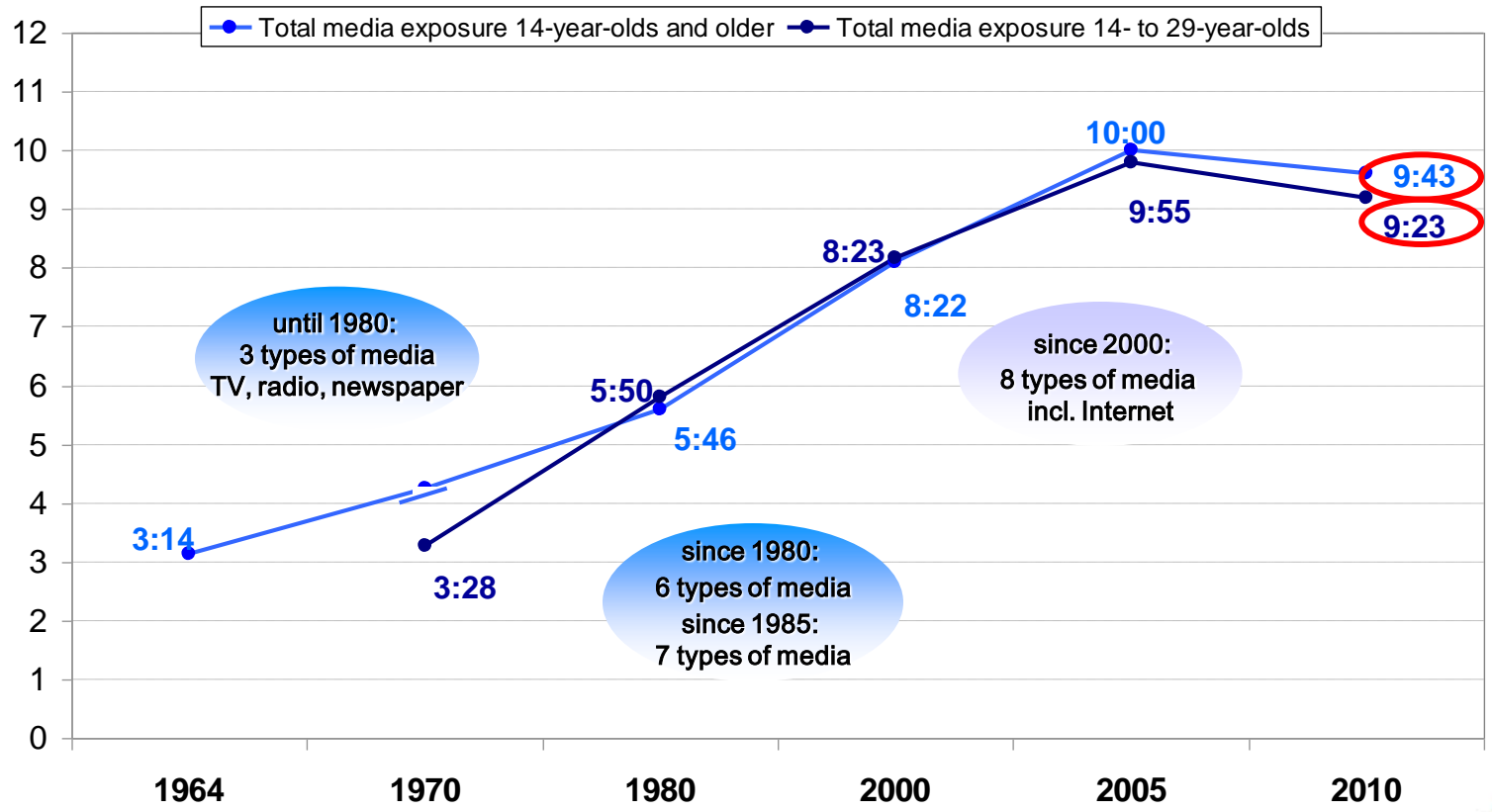
Source: ARD/ZDF-Langzeitstudie Massenkommunikation 1964-2010.

Time spent with each medium per day (minutes): Comparison age groups 14+ and 14- to 29-year-olds


Legend:
- Population 14+ (solid line)
- Population 14-29 years (dashed line)

Series:
- TV
- Radio
- Newspapers
- Sound carriers
- Internet
- Books
- Magazines
- Video / DVD

Circled values at 2010: 220, 151, 144, 136, 187, 83, 80, 35, 30, 22, 23, 10, 8, 6, 5, 4

Source: ARD/ZDF-Langzeitstudie Massenkommunikation 1964-2010.

# Characteristic of media use by young people: media multitasking

TV Multitasking

Percent of 7th–12th graders who say they do any of the following while watching TV: use a computer, read, play video games, text message or listen to music:

- 12% Never
- 19% A little of the time
- 39% Most of the time
- 29% Some of the time
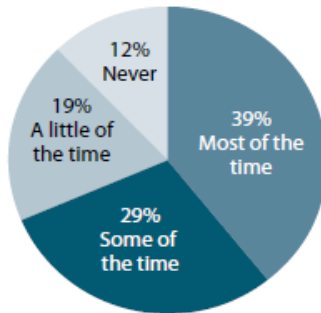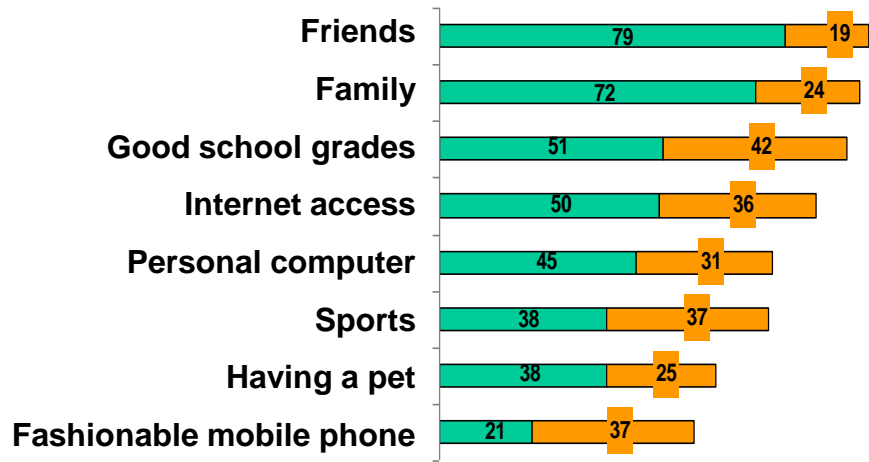
Computer Multitasking

Percent of 7th–12th graders who say they do any of the following while using the computer: watch TV, read, play video games, text message or listen to music:
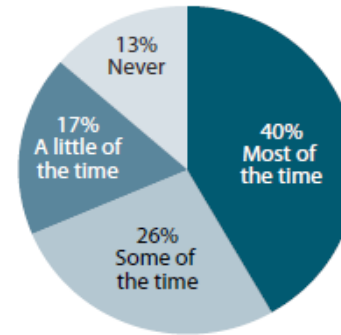
- 13% Never
- 17% A little of the time
- 40% Most of the time
- 26% Some of the time

Nevertheless:
media are not the most important part of young people´s lives

At the moment, (very) important to me are/is …

■ **Very important**   ■ **important**

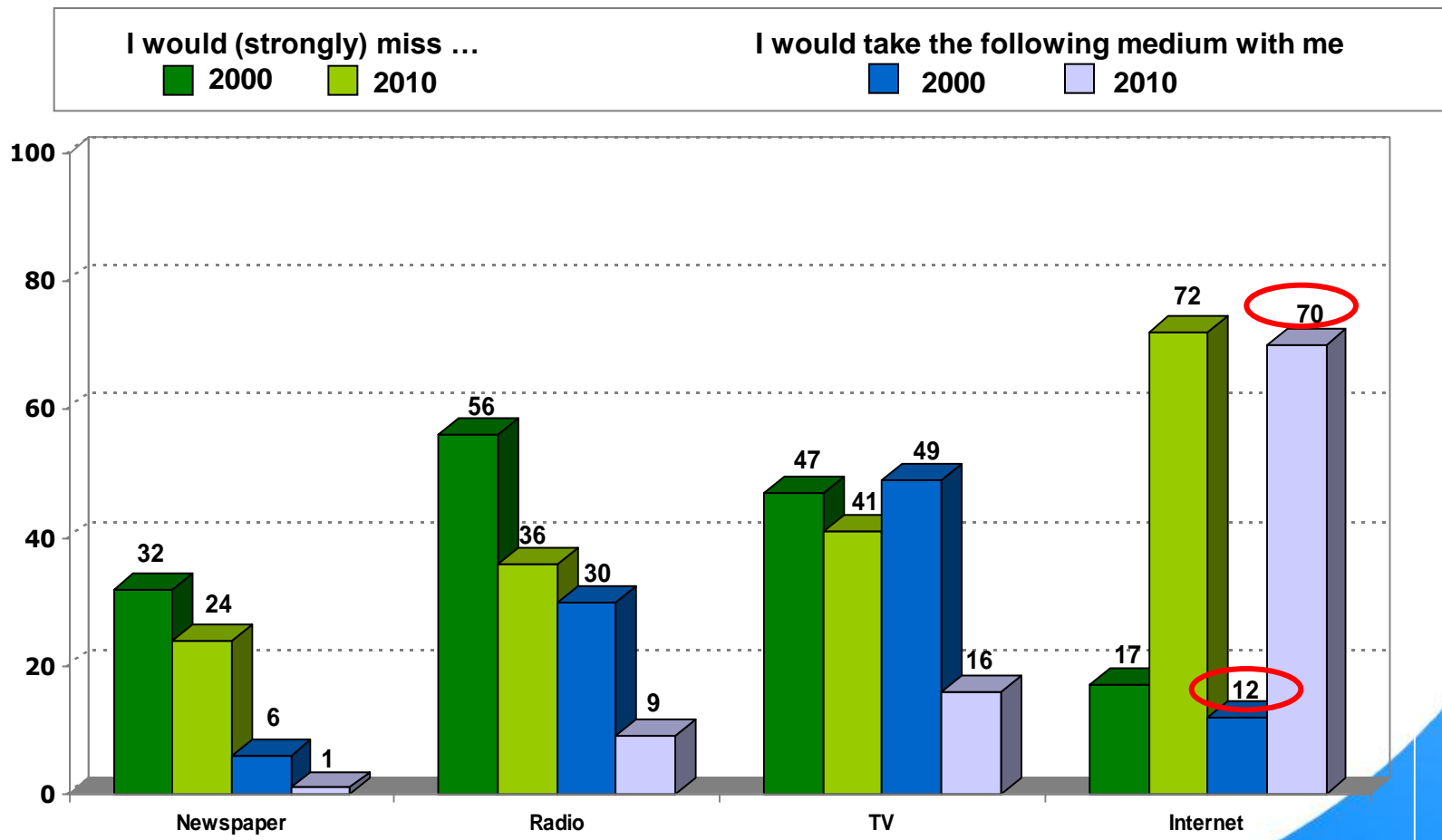|		
Friends	79	19
Family	72	24
Good school grades	51	42
Internet access	50	36
Personal computer	45	31
Sports	38	37
Having a pet	38	25
Fashionable mobile phone	21	37

Basis: n=737, 10-18 years, percentages
Source: BITKOM: Jugend 2.0. Eine repräsentative Untersuchung zum
Internetverhalten von 10- bis 18-Jährigen, p. 9.

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What types of media would you miss and take with you on a deserted island?

Percentages, comparison over time

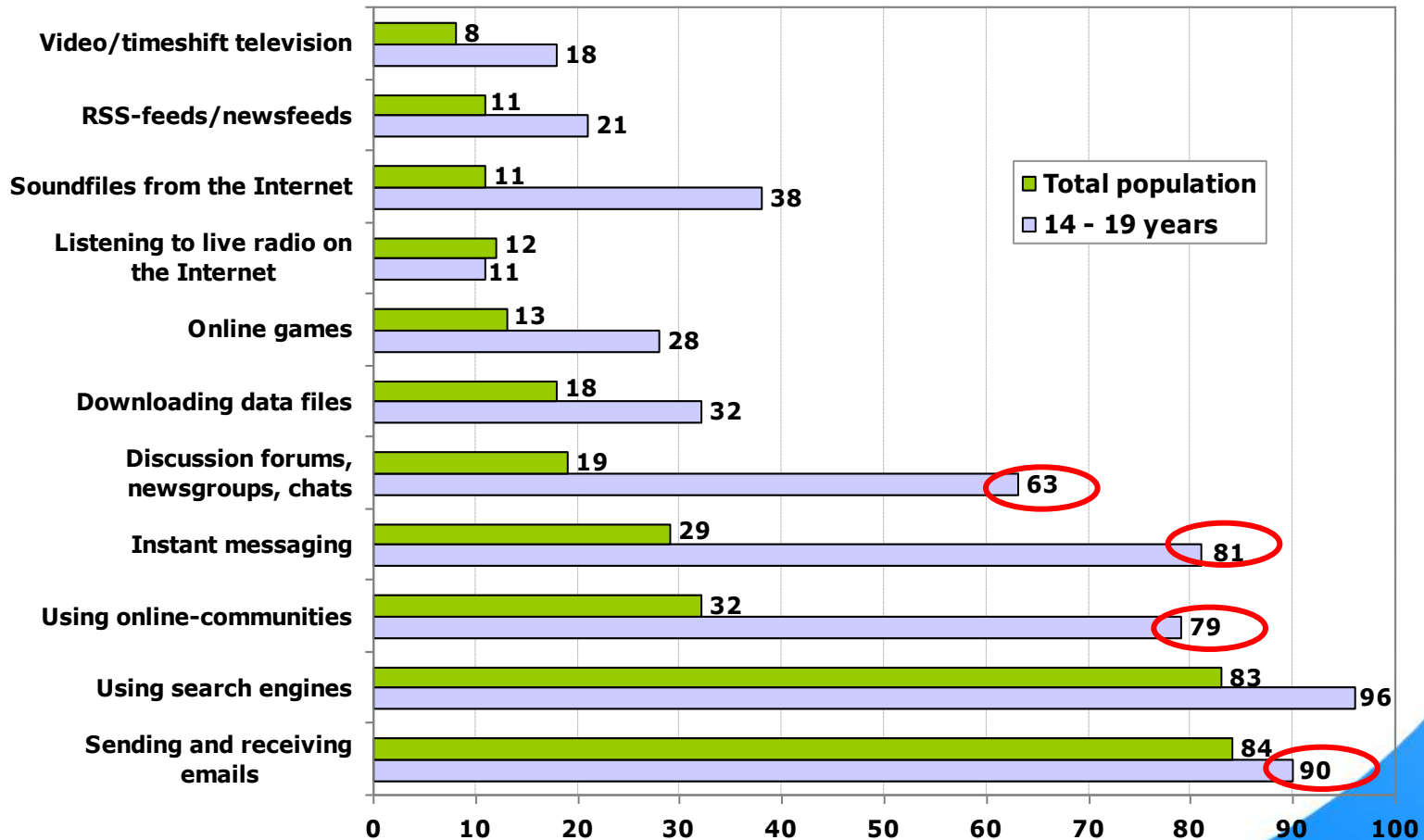**I would (strongly) miss …** ■ 2000 ■ 2010

I would take the following medium with me ■ 2000 ■ 2010

Newspaper: 32, 24, 6, 1
Radio: 56, 36, 30, 9
TV: 47, 41, 49, 16
Internet: 17, 72, 12, 70

Basis: n=4.503, 14-29 years

Activities on the web:
Comparison 14- to 29-year-olds and total population

At least once a week, percentages

Legend:
- ■ Total population
- □ 14 - 19 years

Activity	Total population	14 - 19 years
Video/timeshift television	8	18
RSS-feeds/newsfeeds	11	21
Soundfiles from the Internet	11	38
Listening to live radio on the Internet	12	11
Online games	13	28
Downloading data files	18	32
Discussion forums, newsgroups, chats	19	63
Instant messaging	29	81
Using online-communities	32	79
Using search engines	83	96
Sending and receiving emails	84	90

Basis: n=1.252, German speaking Internet users 14+
Source: ARD/ZDF-Onlinestudie 2010, selection.

Basic Data Adolescents and Media 2011

Pre-teens and adolescents are very self-confident about their computer literacy

By age, percentages

Legend: ■ just as good ■ better ■ Not as good

	Adolescents total (n=737)	10–12 year-olds (n=237)	13–15 year-olds (n=235)	16–18 year-olds (n=265)
Father just as good as/better than the father	18 / 34	13 / 13	25 / 31	15 / 55
not as good as the father	43	69	39	23
Mother just as good as/better than the mother	19 / 59	29 / 27	17 / 65	11 / 82
not as good as the mother	20	40	16	6
Teacher just as good as/better than the teacher	28 / 35	22 / 13	37 / 30	26 / 59
not as good as the teacher	24	47	19	7

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In a nutshell

- Young people spend a lot of time with media –
  but **friends and family rank first in their priorities**

- They use traditional media (TV, radio, print media) –
  but in a different way than former media generations (**multitasking, media convergence**)

- They appreciate and use the web for communication purposes –
  the Internet and web 2.0 are extensively used **to network and socialize**

- They think their computer and information literacy skills are pretty good –
  and **do not consider teachers (or librarians) as experts** or role models

Mapping the information seeking behaviour of 'Digital Natives':

an academic form of moral panic?

Diana Oblinger & James Oblinger: Educating the Net Generation (2005):

- **Visual-spatial skills:**
  they can integrate the virtual and physical

- **Ability to read visual images:**
  they are intuitive visual communicators

- **Inductive discovery:**
  they learn better through discovery than by being told

- **Attentional deployment:**
  they are able to shift their attention rapidly from one task to another

- **Fast response time**:
  they are able to respond quickly and expect rapid responses in return

'Google Generation' research studies at UCL CIBER, UK

Main results of the report "**Information Behaviour of the Researcher of the Future** ":

- **Information literacy of young people has not improved** with the widening access to, and greater familiarity with, information technology

- Their speed of web searching means that **little time is spent in evaluating information**, either for relevance, accuracy, or authority

- They have a **poor understanding of their information needs** and thus find it difficult to develop effective search strategies as a result

- Young people **do not find library-sponsored resources intuitive** and therefore prefer to use Google or Yahoo! instead: these offer a **familiar, if simplistic solution**, for their study needs.

Source: Nicholas D., Rowlands, Ian, Clark, D., Williams, P. (2011): Google Generation II: web behaviour experiments with the BBC. In: Aslib Proceedings, vol. 63, No 1, p. 28-45.

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**Information literacy progress report
University of Washington Information School**

Project Information Literacy (PIL):

22-item online survey to students enrolled at 25 U.S. colleges and universities
n=8,353 (largest scholarly survey analysis of information literacy so far)

Research questions:

- How do students evaluate information and use information once they have found it?
- What difficulties do students encounter with course-related and everyday life research from start to finish?

Source: Head, A.J. & Eisenberg, M.B. (2010):Truth to be told: How college students evaluate and use information in the digital age.

Information literacy progress report

Main results:

- For many of today's undergraduates, the idea of being able to conduct an exhaustive search is inconceivable. **Information seems to be as limitless as the universe**.

- The findings suggest students use an information-seeking and research strategy driven by **efficiency** and **predictability.**

- Students actively look for strategies on how **to reduce the search options** and the majority prefer the **same search strategies**, regardless of the topic or the information needed.

Information literacy progress report

Main results:

- Evaluating information is a **collaborative process**:

Figure 7: Asking for Help with Evaluation

	Course work	Personal use
Instructors	49%	18%
Classmates	32%	43%
Friends/Family	18%	61%
Librarians	11%	5%
Writing Center	7%	
Licensed Professionals	5%	12%
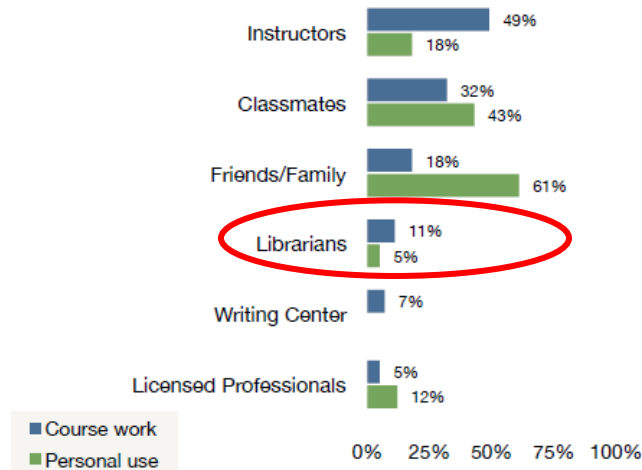
- The authors identify a gap between the "resources-focused" training that students receive from librarians and their ability to control and manage the resulting information overload

What 'Digital Natives' search and what libraries offer: room for improvement

What 'Digital Natives' search and what libraries offer

"Digital Natives" and Libraries: Room for Improvement

"Digital Natives" prefer

... **inductive** discovery and are **intuitive** visual communicators

... to search and use information **"just in time"**

... a familiar and **simplistic solution** for their study needs (Google, Wikipedia …)

... to actively strategize how to **reduce the search options** of information resources

... to use **Internet** and **Web 2.0**

Their search behaviour is characterized by routine and effectiveness

How to bridge the gap:

Librarians tend

... to ignore that the meaning of **learning** and **knowing** has changed fundamentally

... to think that their users have a **sophisticated understanding** of information retrieval

... to offer **complex** information resources in the "deep web"

... to provide **more online resources** with even more content (repositories, databases ...)

... to focus on **traditional media**

We think that competent search behaviour is characterized by thoroughness and information literacy

(Proactive) strategies to capture 'Digital Natives'

Changing a library's website **from a static repository to a dynamic service point**:
a concept developed from Irvine Libraries, University of California

- 'digital concierge'

- implementation of feedback mechanisms
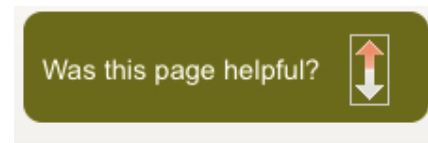
- evaluation of web statistics

Goal: Making the use of a library's resources and services
in the research process
more interactive, enjoyable, and rewarding.

(Proactive) strategies to capture 'Digital Natives'

(Proactive) strategies to capture 'Digital Natives'

A. **Are you looking for information about how to request something through ILL?**
 a. If you are affiliated with UCI (faculty, staff, student) click here
  i. **Do you need help requesting an article?**
   1. See ILL form for articles at
    http://ucelinks.cdlib.org:8888/citation/sfx_local?rft.genre=article
   2. View a tutorial on using ILL to request articles
   3. Does this answer your question? If not
    a. Ask a Librarian
    b. Return to previous page
  ii. **Do you need help requesting a book?**
   1. See ILL form for books at
    http://ucelinks.cdlib.org:8888/citation/sfx_local?rft.genre=book
   2. View a tutorial on using ILL to request books
   3. Does this answer your question? If not
    a. Ask a Librarian
    b. Return to previous page
  iii. **Do you need help putting in a request for something else?**
   1. Ask a Librarian
   2. Return to previous page
  iv. **Do you need to request something from the Grunigen Medical Library to be delivered to the Main Campus?**
   1. See web pages about "Transfers" at
    http://www.lib.uci.edu/services/ill/interlibrary-loan.html
   2. Does this answer your question? If not
    a. Ask a Librarian
    b. Return to previous page

Source: Ferry, K.; Johnson, C.; Palmer, C. (2010): Proof of Concept: The Fatal First Click: How do we hook them once we've got them to look? Paper presented at the IFLA General Conference and Assembly 2010, Gothenburg.

In a nutshell

John Palfrey & Urs Gasser:
Born Digital. Understanding the First Generation of Digital Natives (2008)

»There are no hard data to suggest that Digital Natives are smarter than anyone who came before them. Neither is there any sign that kids are dumber, or in any way less promising, than previous generations of kids. **Digital Natives are doing the same things their parents did with information, just in different ways**.« (p. 244)

Thank you for attention!
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Sources (selection):

Ferry, K.; Johnson, C.; Palmer, C. (2010): Proof of Concept: The Fatal First Click: How do we hook them once we've got them to look? Paper presented at the IFLA General Conference and Assembly 2010, Gothenburg.

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Rowlands I., Nicholas D., Williams P., Huntington P., Fieldhouse M., Gunter B., Withey R., Jamali H., Dobrowolski T., Tenopir (2008): The Google generation: the information behaviour of the researcher of the future. In: Aslib Proceedings, vol. 60, No 4 (pp. 290-310).