



**SENTER
FOR IKT I
UTDANNINGEN**

Comments to the International Computer and Information Literacy study 2013

Ove E. Hatlevik

The International Computer and Information literacy study 2013

- The Norwegian participation was initiated and financed by the Norwegian Directorate for Education and Training (**Utdanningsdirektoratet**)
- The study in Norway was carried out by ILS/ EKVA at the University of Oslo and the Centre for ICT in Education

The Norwegian ICILS project group

- NRCs Inger Throndsen (ILS) and Geir Ottestad (Centre for ICT)
- Members of group:
 - Rolf Vegar Olsen, Anubha Rohatgi and Fazilat Siddiq (ILS)
 - Ove E. Hatlevik, Greta B. Gudmundsdottir and Massimo Loi (Centre for ICT)

Benefits of the study

- focused on a new topic (ICT literacy)
- ICT literacy is important in the digital area
- Combining testing and questionnaire to students with questionnaire to teachers, school leaders and ICT coordinator

Norwegian framework of ICT literacy

<i>Search and process</i>	<i>Produce</i>	<i>Communicate</i>	<i>Digital judgement</i>
-------------------------------	----------------	--------------------	------------------------------

Framework for Basic skills (Norwegian
Directorate for Education and
Training, 2012, p. 12)

Framework for ICILS 2013

- **Strand 1**

- Knowing about and understanding use
- Accessing and evaluating information
- Managing information

- **Strand 2**

- Transforming information
- Creating information
- Sharing information
- Using information safely and securely

Framework for the study was in line with the Norwegian framework

<i>Search and process</i>	<i>Produce</i>	<i>Communicate</i>	<i>Digital judgement</i>
Accessing and evaluating information	Transforming information	Sharing information	Using information safely and securely
Managing information	Creating information		
Knowing about and understanding use			

Competence aims in the curriculum:

Students are able to ..

- use digital sources and tools ... (**Norw.**)
- use spread sheet to complete and present calculations (**math**)
- use digital tools to register, process and publish data ... (**science**)
- information from search, and evaluate the findings ... (**soc science**)
- evaluate how text and picture communicate and influence on each other (**arts and crafts**)

Tasks in the study mapped to the Norwegian framework

<i>Search and process</i>	<i>Produce</i>	<i>Communicate</i>	<i>Digital judgement</i>	Knowing about and understanding use
11	26	6	9	10

- There are some authentic tasks, but it is difficult to measure communication

The study has information about proficiency levels

- 3% of students on level 4
 - 27% .. on level 3
 - **46% .. on level 2**
 - 24% of students on level 1 or below
-
- This calls for action and differentiation

Variables influencing students' ICT literacy

- Students' home environment
- Academic aspirations
- Gender (female)
- Use at home
- Self-efficacy

Teachers

- are reporting positive attitudes towards using ICT
- are reporting moderate levels of use
- are lacking systematic development programs

What is successful teaching?

- Due to sample procedure it is not possible to connect teacher data with student data
- Need more information about what teachers and schools can do
 - i.e. change procedure or develop questions to students about their learning environment

Use of ICT in mathematics lessons (Pisa 2012)

- **“Within the last month, has a computer ever been used ... “**
 - **7 statements about purposes**
 - **used by students or demonstrated by teacher**

Use of ICT (TALIS 2013)

- **In TALIS 2013 teachers reported how often “Students use ICT for projects or class work”**

Use of ICT (ICILS 2013)

- **In the ICILS 2013 both students and teachers reported about their use of ICT for several purposes**

Different measures of using ICT

- In the ICILS 2013 both students and teachers reported about their use of ICT for several purposes
- In TALIS 2013 teachers reported how often “Students use ICT for projects or class work”
- PISA 2012 students reported about “Within the last month, has a computer ever been used ... “

What do we want to know about teachers and students use?

- how is ICT used and what is ICT used for?
 - a more qualitative approach
- how is the use of ICT connected to the way students learn?

How students learn

- self-regulated learners
 - motivated and active learners
 - self-discipline
- learning from feedback
 - teachers or collaboration with peers
- learning environment

Reports available

- International report:
 - www.iea.nl
- National reports:
 - www.iktsenteret.no/ressurser/digitale-ferdigheter-alle
 - www.idunn.no/laering-av-ikt