

# ICILS Project Update

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# ICILS Background: CIL

*Computer and information literacy (CIL) refers to an individual's ability to use computers to investigate, create and communicate in order to participate effectively at home, at school, in the workplace and in the community.*

## **Strand 1**

*Collecting and managing information*

### **Aspect 1.1**

Knowing about and understanding computer use

### **Aspect 1.2**

Accessing and evaluating information

### **Aspect 1.3**

Managing information

## **Strand 2**

*Producing and exchanging information*

### **Aspect 2.1**

Transforming information

### **Aspect 2.2**

Creating information

### **Aspect 2.3**

Sharing information

### **Aspect 2.4**

Using information safely and securely

# ICILS Background: Summary Research Questions

1. What variations exist between countries, and within countries, in student computer and information literacy?
2. What individual/personal student characteristics are related to student achievement in computer and information literacy?
3. What characteristics of students' technological backgrounds are related to student achievement in computer and information literacy?
4. What aspects of schools and education systems are related to student achievement in computer and information literacy?

# ICILS Background: Instruments

- Student test of CIL: four sets of authentic tasks each taking 30 minutes
- Student questionnaire: 20 minutes completed on computer
- Teacher, Principal, ICT-coordinator questionnaires: 15-20 minutes completed online or on paper
- National contexts survey: completed online through national centers

# ICILS in 2012/13

- Main survey data collection underway in 21 countries (education systems)
- Argentina (Buenos Aires), Australia, Canada, Chile, Croatia, Czech Republic, Denmark, Germany, Hong Kong SAR, Korea, Lithuania, Netherlands, Norway, Poland, Russian Federation, Slovak Republic, Slovenia, Switzerland, Thailand, and Turkey

# ICILS in 2012/2013

## Data collection/field operations

- Five separate operations manuals with additional supplementary materials
- Additional software interface manuals
- Individual school preparation for computer-based delivery including software, surveys and support from NRCs and the ISC
- Field operations and scorer training meeting took place in November/December 2012 at the IEA DPC in Hamburg
- All data collection complete by end 2013

# ICILS in 2012/2013

## Assessment Framework

- Undergoing final review by editor in preparation for typesetting
- Due for release late 2013

# ICILS in 2014

<b>End 2013</b>	Data collection complete
<b>Early 2014</b>	Final weighting, scaling and analysis
<b>Late 2013 to May 2014</b>	International report drafted
<b>June 2014</b>	NRC Meeting to review international report
<b>November 2014</b>	Release international report
<b>July to November 2014</b>	Preparation of international database and technical report
<b>December 2014</b>	Release of international database and technical report



# Potential for a Described CIL Proficiency Scale Developed using ICILS field trial data

## Level 1

Students working at Level 1 demonstrate a functional working knowledge of computers as tools to complete tasks. They implement the most commonly used file management and software commands when instructed. They apply conventional software commands to perform basic communication tasks and demonstrate awareness of protecting privacy of electronic information.

Students working at Level 1 for example:

- recognize that there are different file types used by computers;
- add given text to a web-document;
- demonstrate basic control of layout of images and text when adding content to a simple web-document;
- identify who receives an email by carbon copy (Cc);
- relate password complexity to password security;
- suggest a risk of failing to log out from a user account when using publicly accessible computer.

## From level 1 to level 2

- Increased independence in searching for information and planning information use (i.e. beginning to work without needing explicit instruction for all aspects of tasks)

## Level 2

Students working at Level 2 use computers as tools to complete very basic and explicit information gathering and management tasks. They locate simple, explicit information from within given electronic sources and add content to and make simple changes to existing information products when instructed. They edit information products and create products that show limited consistency of design and information management.

Students working at Level 2, for example:

- insert information to a specified cell in a spreadsheet;
- use software to crop an image;
- locate explicitly stated information on website pages;
- select relevant images to include in a presentation;
- select some relevant information from web-based sources to include in a presentation;
- demonstrate basic control of text layout and colour use when creating a presentation; and
- explain a potential problem if a personal email address is publicly available.

## From level 2 to level 3

- increased critical perspective and autonomy in deciding how to go about completing tasks

### Level 3

Students working at Level 3 demonstrate some autonomy when using computers as information gathering and management tools. They select the best information source to meet a specific purpose, retrieve information from given electronic sources to answer specific, concrete questions and follow instructions to use conventionally recognized software commands to edit and reformat information products. They recognise that the credibility of web-based information is reliant on the creators of the information.

Students working at Level 3 for example:

- distinguish between paid and organic search results on a search engine;
- include all specified necessary information on a web-page;
- create and implement an appropriate title design for a poster;
- evaluate the reliability of information presented on a crowdsourced website;
- select an appropriate website navigation structure for given web page content;
- create a balanced layout of a webpage;
- recognise the purpose of a captcha form;
- save a presentation with a new filename; and
- select relevant information according to given criteria to include in a website.

## From level 3 to level 4

- increased precision in information searches and increased control of layout and formatting features to support the communicative purpose of information products

## Level 4

Students working at level 4 generate refined, well target searches for information and evaluate the reliability of information based on its content and likely origin. They create information products that demonstrate consideration of audience and communicative purpose.

Students working at Level 4 for example:

- create a website page to match a given set of instructions;
- demonstrate clear control of colour to support the communicative purpose of a presentation;
- generate search terms that target specific attributes of the desired search results.
- demonstrate clear control of text layout when creating a presentation;
- use generic mapping software to represent text information as a map route;
- evaluate the reliability of information provided on a commercial website; and
- identify that a generic greeting in an email indicates that the sender does not know the recipient.



## From level 4 to level 5

- increased efficiency of information searches and increased coherence of information products with respect to audience and purpose

## Level 5

Students working at level 5 use simple software features to increase the efficiency of information searches and select the most relevant information to use for specific communicative purposes. They create information products that show clear evidence of planning and technical competence. They use software features to reshape and present information consistent with presentation conventions and are aware of different categories of problems that can arise regarding the use of proprietary information on the internet.

Students working at Level 5 for example:

- show clear control of the design and layout text in a poster;
- adapt text from sources to suit an specified audience and purpose;
- select relevant images from electronic sources to demonstrate a simple process;
- demonstrate clear control to balance the layout of text and images on an information sheet;
- select, from a large set, a search result that meets two requisite search criteria;
- apply filtering features to increase the efficiency of a search;
- select and adapt source information to create a poster with persuasive purpose; and
- recognise the difference between legal, technical and social requirements when using images on a website.



# Thank you



Secretariat



The Australian Council *for* Educational Research

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