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ATE: 7 December 2016

TO: Robert Sivinski, OMB

THROUGH: Kashka Kubzdela, NCES

FROM: Lydia Malley, NCES

Re: International Computer and Information Literacy Study (ICILS 2018) Field Test Questionnaires Change Request (OMB# 1850-0929 v.2)

The International Association for the Evaluation of Education Achievement (IEA) is currently reviewing the U.S. adaptations to the International Computer and Information Literacy Study (ICILS 2018) field trial questionnaires proposed by NCES (as reflected in this submission). Should there be any changes between what is submitted here and the final versions of the field test questionnaires upon IEA's final approval, we expect them to be minor wording edits, which we would submit to OMB for approval as a change request upon OMB's approval of this submission.

The draft international source versions of the questionnaires were approved in May 2016 as part of the ICILS 2018 Field Test and Recruitment for Main Study clearance package (OMB# 1850-0929 v.1). This request amends the approved record with the versions of the ICILS 2018 field test questionnaires that contain the finalized international versions of the questionnaires along with the U.S. adaptations that have been submitted for approval to the IEA (see the attached updated Appendix B). Accordingly, this memo details the changes made to the international source versions in preparation for the U.S. field test, which will be conducted in spring 2017. The changes listed below are arranged by questionnaire (e.g., school principal, ICT coordinator, teacher, and student), and then by the four types of changes made: (1) U.S. adaptations; (2) new items and (3) deleted items (where applicable); and (4) revisions to wording between the approved draft and the provided here final international questionnaires.

In addition to changes to the questionnaires outlined in this memo, the estimated time for completing the school (principal and ICT) questionnaire has been re-evaluated. While the previous OMB submission estimated that the total time for these 2 questionnaires would be 20 minutes, this change request updates the total time for completing the school questionnaires to 30 minutes (15 minutes for each, the principal and ICT components). Also, the time to complete the student assessment has been revised from 90 to 120 minutes, although this does not affect the burden totals for which clearance is requested. These revisions to burden have been reflected in the attached here updated Part A. These changes increase the total requested burden time by 5 hours (from 2,041 to 2,046 hours), and correspond to an increase in estimated respondent burden time cost of $224 (from $57,061 to $67,285). Lastly, the international assessment framework for distribution and naming of dimensions has been slightly revised, as reflected in the revised Part A.

Because a few new questionnaire items have been added and burden time slightly increased, NCES is announcing in the Federal Register another 30-day public comment period to accompany this change request.

U.S. Adaptations to ICILS Questionnaires – Background

The international source versions are authored in U.K. English with the "terms to-be-standardized" marked inside brackets ([ ]). In the tables below, these changes are referred to as adaptations. This includes adaptations of common terms, such as ISCED levels mapped to U.S. education system; adjusting grammar to U.S. standard usage, etc. The IEA and the international contractors have also revised several items from the draft international questionnaires, deleted several items from the draft international questionnaires, as well as added a few new items. Straightforward adaptations of U.K. English to American English (e.g., favourite to favorite) are not included in the tables below given that they do not require an explanation.

Summary of Changes to Field Test School, ICT Coordinator, Teacher, and Student Questionnaire Items

A. Principal Questionnaire
1. Adaptations of all items
2. Deleted Items
3. Revised Items
B. ICT Coordinator Questionnaire
1. Adaptations of all items
2. New Items
3. Revised Items
C. Teacher Questionnaire
1. Adaptations of all items
2. New Items
3. Deleted Items
4. Revised Items
D. Student Questionnaire
1. Adaptations of all items
2. New Items
3. Revised Items

A. <u>Principal Questionnaire</u>

1. **Adaptations of all items**

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
[INTRODUCTION TO THE SCHOOL PRINCIPAL QUESTIONNAIRE]	**School Principal** Questionnaire	Intro header
Thank you for taking part in the 2018 International Computer and Information Literacy Study. The purpose of this study is to examine across different countries the extent to which young people in [target grade] have developed computer and information literacy, which is defined as the ability to use Information and Communications Technology (ICT) to investigate, create, and communicate with others at home, school, the workplace and in society. In this questionnaire ICT can refer to: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • [smartphones], except when being used for talk and text. In this questionnaire you will find questions about: • You and your use of ICT • Characteristics of your school • The application of ICT in teaching and learning at your school • Aspects of the management of ICT in your school.	Your school has agreed to participate in the 2017 Field Test for the International Computer and Information Literacy Study (ICILS). ICILS is an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). The purpose of ICILS is to examine across different countries the extent to which young people in eighth grade have developed computer and information literacy, which is defined as the ability to use Information and Communications Technology (ICT) to investigate, create, and communicate with others at home, school, the workplace and in society. In this questionnaire ICT can refer to: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • smartphones, except when being used for talk and text. This questionnaire is addressed to school principals who are asked to provide information about their schools. Since your school has been selected as part of a nationwide sample, your responses are very important in helping to evaluate the questions as relevant to describing eighth-grade education in the United States. Some of the questions may require that you look up school records, so	Intro

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
Please answer the questions with reference to [the school of the sampled students] as a whole. In answering the questions please refer to the following definition of 'school': A school is [to be country adapted]. For some of the questions you are asked to answer referring only to [target grade] students. Please look at the instructions given in each of the questions. We thank you for your effort and cooperation!	you may wish to arrange for the assistance of another staff member to help provide this information. In this questionnaire you will find questions about you and your use of ICT; characteristics of your school; the application of ICT in teaching and learning at your school; and aspects of the management of ICT in your school. Since ICILS is an international study and all countries are using the same questionnaire, you may find that some of the questions seem unusual or are not entirely relevant to you or schools in the United States. Nevertheless, it is important that you do your best to answer all the questions so comparisons can be made across countries in the study. Please answer the questions with reference to your school as a whole. For some of the questions you are asked to answer referring only to eighth-grade students. Please look at the instructions given in each of the questions. It is estimated that you will need about 15 minutes to complete the questionnaire. **We appreciate the time and effort this takes and thank you for your cooperation and contribution.** The National Center for Education Statistics (NCES) is authorized to collection information from the questionnaire under the Education Science Reform Act of 2002 (ESRA), 20 U.S. Code, § 9543. You do not have to provide the information requested. However, the information you provide will help the U.S. Department of Education's ongoing efforts to understand better how the educational system in the United States compares to that in other countries. There are no penalties should you choose not to participate in this study. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S. Code, § 9573). Your responses will be combined with those from other participants to produce summary statistics and reports. Thank You.	
[target grade]	eighth grade, eighth-grade	Intro, PQ4
[smartphones]	smartphones	Intro
Please answer the questions with reference to [the school of the sampled students] as a whole.	your school	Intro
A school is [to be country adapted]	~~A school is [to be country adapted]~~ (Sentence removed)	Intro
How often do you use ICT for the following activities?	Moodle, Blackboard	PQ2aj

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
Work with a learning management system (e.g. [Moodle])		
What is the total number of boys and girls in the school?	**What is the total number of boys and girls in your school as of April 3, 2017?**	PQ3
What is the total number of boys and girls in the eighth grade?	**What is the total number of boys and girls in the eighth grade as of April 3, 2017?**	PQ4
What is the lowest (youngest) grade that is taught at your school? National Adaptation 1	Pre-Kindergarten	PQ5a
National Adaptation 2	Kindergarten	PQ5a
National Adaptation 3	First grade	PQ5a
National Adaptation 4	Second grade	PQ5a
National Adaptation 5	Third grade	PQ5a
National Adaptation 6	Fourth grade	PQ5a
National Adaptation 7	Fifth grade	PQ5a
National Adaptation 8	Sixth grade	PQ5a
	Seventh grade	PQ5a
	Eighth grade	PQ5a
What is the highest (oldest) grade that is taught at your school?		PQ5b
National Adaptation 9	Eighth grade	PQ5b
National Adaptation 10	Ninth grade	PQ5b
National Adaptation 11	Tenth grade	PQ5b
National Adaptation 12	Eleventh grade	PQ5b
National Adaptation 13	Twelfth grade	PQ5b
In your opinion, how important is each of the following outcomes of education? [apps] **Are there procedures in place to monitor whether teachers at this school use ICT to achieve the following learning outcomes?** [apps]	apps, apps	PQ9g, PQ10g
Are teachers in your school expected to acquire knowledge and skills in each of the following activities? Assess students' [computer and information literacy **Who has the main responsibility for making decisions about each of the following aspects of ICT in this school?** The assessment of students' [computer and information literacy] The implementation of a [computer and information literacy] curriculum at the school	computer and information literacy	PQ11k, PQ12j, PQ12k
Who has the main responsibility for making decisions about each of the following aspects of ICT in this school? [Ministry department or local/district authority]	School district or relevant education authority	PQ12
Does your school or school system have policies with regard to the following aspects of ICT use?	students with disabilities	PQ13i

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
[students with special needs or specific learning difficulties]		
[Cyberbullying]	Cyberbullying	PQ13j
Throughout the current school year, how many teachers in this school participate in the following forms of professional development about ICT for teaching and learning? [community of practice]	community of practice	PQ14h

2. Deleted Items

Item Number	Deleted Item
PQ3	**How long have you been the [principal] of this school including the current school year?** *(Please mark only one choice)* • 1 – 2 years • 3 – 5 years • 6 years or more

3. Revised Items

2018 FT Draft International Version		2018 FT Final International Version	
Item Number	**Item**	**Item Number**	**Revised Item**
	Thank you for taking part in the 2018 International Computer and Information Literacy Education Study. The purpose of this study is to study across different countries the extent to which young people in [target grade] have developed computer and information literacy, which is defined as the ability to use digital devices to investigate, create, and communicate with others at home, school, the workplace and in society. We know that the interpretation of the results of the student assessment and questionnaire depends on the culture of the country, the school, and the teachers' intentions. In order to understand the context of student learning outcomes in this area, we need information from you, as school principal, about the school context in which the students' learning of computer and information literacy takes place. Please help us to understand the findings from the student assessment by completing this school questionnaire.		*Note: Changed wording and removed and added paragraphs.* Thank you for taking part in the 2018 International Computer and Information Literacy Study. The purpose of this study is to examine across different countries the extent to which young people in [target grade] have developed computer and information literacy, which is defined as the ability to use Information and Communications Technology (ICT) to investigate, create, and communicate with others at home, school, the workplace and in society. In this questionnaire ICT can refer to: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • [smartphones], except when being used for talk and text.

2018 FT Draft International Version		2018 FT Final International Version	
Item Number	**Item**	**Item Number**	**Revised Item**
	If you find something in our questions that does not perfectly match the conditions of this school, please take into account that this questionnaire has been developed for an international study and has to be used in different school systems.		
PQ4 PQ5 PQ6 PQ7 PQ8 PQ9 PQ10 PQ11 PQ12 PQ13 PQ14 PQ15 PQ16 PQ17		PQ3 PQ4 PQ5 PQ6 PQ7 PQ8a PQ9 PQ10 PQ11 PQ12 PQ13 PQ14 PQ15 PQ8b	*Note: Items renumbered*
PQ2	**How often do you use ICT to:** a) Search for information on the Internet or an education system network	PQ2 PQ2b	*Note: Modified stem and answer dimension; also added second part to question.* **How often do you use ICT for the following activities?** a) Search for information on the Internet or a network maintained by education authorities for its schools **If you use ICT for any other school-related activities at least once a month, please list them.** _____
PQ4		PQ3	*Note: Added instructions but removed for U.S. version* When answering the questions in this section, please refer to the definition of 'school' given in the note at the beginning of this questionnaire.
PQ7	*A full-time teacher is employed at least 90% of the time as a teacher for the full school year.* *All other teachers should be considered part-*	PQ6	*Note: Modified instructions* *A full-time teacher is employed on a regular basis as a teacher for at least 90% of full-time hours for the full*

2018 FT Draft International Version		2018 FT Final International Version	
Item Number	Item	Item Number	Revised Item
	time.		*school year.* *All other teachers should be considered part-time.*
PQ10	**In your opinion, how important is the use of ICT in this school for each of the following outcomes of education?** a) Developing students' basic computer skills (e.g. internet use, word processing, presentation software) b) Developing students' skills in using ICT for collaboration with others c) Using ICT for facilitating students' responsibility for their own learning d) Using ICT to augment and improve students' learning e) Developing students' understanding and skills relating to safe and appropriate use of ICT f) Developing students' proficiency in accessing and using information with ICT g) Developing students' ability to write [apps] or programs	PQ9	*Note: Modified stem and tense of answer dimensions* **In your opinion, how important is each of the following outcomes of education?** a) The development of students' basic computer skills (e.g. internet use, email, word processing, presentation software) b) The development of students' skills in using ICT for collaboration with others c) The use of ICT for facilitating students' responsibility for their own learning d) The use of ICT to augment and improve students' learning e) The development of students' understanding and skills relating to safe and appropriate use of ICT f) The development of students' proficiency in accessing and using information with ICT g) The development of students' ability to write [apps] or programs
PQ11	a) Developing students' basic computer skills (e.g. internet use, word processing, presentation software) b) Developing students' skills in using ICT for collaboration with others c) Using ICT for facilitating students' responsibility for their own learning d) Using ICT to augment and improve students' learning e) Developing students' understanding and skills relating to safe and appropriate use of ICT f) Developing students' proficiency in accessing and using information with ICT g) Developing students' ability to write [apps] or programs	PQ10	*Note: Modified verb tense of answer dimensions* a) The development of students' basic computer skills (e.g. internet use, email, word processing, presentation software) b) The development of students' skills in using ICT for collaboration with others c) The use of ICT for facilitating students' responsibility for their own learning d) The use of ICT to augment and improve students' learning e) The development of students' understanding and skills relating to safe and appropriate use of ICT f) The development of students' proficiency in accessing and using information with ICT g) The development of students' ability to write [apps] or programs
PQ12	a) Integrating Web-based learning in their instructional practice b) Using ICT-based forms of student assessment c) Using ICT for monitoring student progress d) Collaborating with other staff via ICT	PQ11	*Note: Modified verb tense of answer dimensions and added dimension* a) Integrate Web-based learning in their instructional practice b) Use ICT-based forms of student assessment c) Use ICT for monitoring student progress

2018 FT Draft International Version		2018 FT Final International Version	
Item Number	**Item**	**Item Number**	**Revised Item**
	e) Communicating with parents via ICT f) Integrating ICT into teaching and learning g) Using subject-specific learning software (e.g. tutorials, simulation) h) Using e-portfolios for assessment i) Using ICT to develop authentic (real-life) assignments for students j) Assessing students' [computer and information literacy]		d) Collaborate with other teachers via ICT e) Communicate with parents via ICT f) Communicate with students via ICT g) Integrate ICT into teaching and learning h) Use subject-specific digital learning resources (e.g. tutorials, simulation) i) Use e-portfolios for assessment j) Use ICT to develop authentic (real-life) assignments for students k) Assess students' [computer and information literacy]
PQ13	**Who has the main responsibility for each of the following aspects of ICT management in this school?** • Other teachers • No one a) Purchasing/supplying ICT equipment b) Selecting software to be used c) Maintaining ICT equipment d) Choosing whether ICT is used in teaching e) Implementing ICTbased approaches in teaching f) Implementing ICTbased approaches in administration g) Using ICT-based approaches to assessment h) Assessment of students' [computer and information literacy] i) Implementation of a [computer and information literacy] curriculum at the school j) Monitoring and maintaining networks k)Maintaining network security	PQ12	*Note: Modified stem and verb tense of answer dimensions, removed answer dimensions, and also added dimension.* **Who has the main responsibility for making decisions about each of the following aspects of ICT in this school?** a) The purchase/supply of ICT equipment b) The choice of non-digital learning materials c) The choice of digital learning materials d) The selection of a learning management system e) The maintenance of ICT equipment f) Decisions about whether ICT is used in teaching g) The implementation of ICT-based approaches in teaching h) The implementation of ICT-based approaches in administration i) The use of ICT-based approaches to assessment j) The assessment of students' [computer and information literacy] k) The implementation of a [computer and information literacy] curriculum at the school l) The development of ICT-related teacher competencies
PQ14	a) Setting up security measures to prevent unauthorised system access or entry b) Restricting the number of hours students are allowed to sit at a computer c) Student access to school computers outside class hours (but during school hours) d) Student access to school computers outside school hours	PQ13	*Note: Modified verb tense of answer dimensions and added new answer dimensions* a) The provision of security measures to prevent unauthorized system access or entry b) Restrictions on the number of hours students are

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Item Number	**Item**	**Item Number**	**Revised Item**
	e) Honouring of intellectual property rights (e.g. software copyrights)		allowed to sit at a computer
	f) Prohibiting access to inappropriate material (e.g. pornography, violence)		c) Student access to school computers outside class hours (but during school hours)
	g) Playing games on school computers		
	h) Giving the local community (parents and/or others) access to school		d) Student access to school computers outside school hours
	computers and/or the Internet		
			e) The fulfilment of intellectual property rights (e.g. software copyrights)
			f) Prohibitions of access to inappropriate material (e.g. pornography, violence)
			g) Student use of non-school related games on school computers
			h) The provision of access to school computers and/or the Internet for the local community (parents and/or others)
			i) Support for [students with special needs or specific learning difficulties]
			j) Unacceptable behaviours towards other students (e.g. [Cyberbullying])
			k) The provision of laptop computers and/or other mobile learning devices for student use at school and at home
			l) Student use of their own digital devices at school
PQ15	**How many teachers in this school participate in the following forms of professional development about ICT for teaching and learning?** *(Please mark one choice in each row)* • *None or almost none* • *Some Many* • *All or almost all* a) Participating in courses on the use of ICT in teaching provided by the school	PQ14	*Note: Modified stem and verb tense and descriptions of answer dimensions; also added a response category and modified responses* **Throughout the current school year, how many teachers in this school participate in the following forms of professional development about ICT for teaching and learning?** *(Please mark one choice in each row)*

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Item Number	**Item**	**Item Number**	**Revised Item**
	b) Working with another teacher who has attended a course and then trains other teachers c) Discussing the use of ICT in education as a regular item during meetings of the teaching staff d) Observing colleagues using ICT in their teaching e) Discussing within groups of teachers about using ICT in their teaching f) Participating in a [community of practice] concerned with ICT in teaching g) Participating in courses conducted by an external agency or expert h) Participating in professional learning programs delivered through ICT		• *None or hardly any* • *Some of them* • *Most of them* • *All or nearly all* a) Courses on the use of ICT in teaching provided by the school or the school system b) Training by another teacher who has attended a course on ICT c) Discussions about the use of ICT in education as a regular item during meetings of the teaching staff d) Observations of colleagues using ICT in their teaching e) Group discussions of teachers about their use of ICT in teaching f) Participation in professional learning programs delivered online g) Participation in courses on ICT conducted by an external agency or expert h) Participation in a [community of practice] concerned with ICT in teaching
PQ16	d) Increasing the range of digital learning resources f) Providing for participation in professional development on pedagogical use of ICT	PQ15	*Note: Modified wording of dimensions and added a new dimension* d) Increasing the range of digital learning resources available for teaching and learning f) Supporting participation in professional development on pedagogical use of ICT k) Providing for students to bring their own ICT for use at school

B. ICT Coordinator Questionnaire

1. Adaptation of all items

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
[Introduction for ICT-coordinators to the questionnaire]	**ICT coordinator** questionnaire	Intro header
This questionnaire is concerned with Information and Communication Technology (ICT) in schools, its use in teaching and learning, and students' development of Computer and Information Literacy (CIL). In this questionnaire, ICT can refer to:	Your school has agreed to participate in the 2017 Field Test for the International Computer and Information Literacy Study (ICILS). ICILS is an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). The purpose of ICILS is to examine across different countries	Intro

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
• desktop computers • notebook or laptop computers • netbook computers • tablet devices • [smartphones], except when being used for talk and text. In this questionnaire you will find questions about: • Your background and familiarity with ICT • Your use of ICT in teaching a reference [target grade] class • The use of ICT in the school • Learning to use ICT in teaching. Some questions focus on a nominated 'reference' class. This is the first [target grade] class that you teach for a regular subject (i.e. other than home room, assembly) on or after the Tuesday following the last weekend before you first accessed this questionnaire. You may, of course, teach the class at other times during the week as well. If you did not teach a [target grade] class on that Tuesday, please use the [target grade] class that you taught on the first day after that Tuesday. Please answer as accurately as you can. You will mostly answer by clicking on a button. You can change your responses at any time until you have clicked on 'I've finished' at the end of the questionnaire. We have estimated that it will take less than 30 minutes of your time to complete the questionnaire. Thank you for making that time available.	the extent to which young people in eighth grade have developed computer and information literacy, which is defined as the ability to use Information and Communications Technology (ICT) to investigate, create, and communicate with others at home, school, the workplace and in society. In this questionnaire ICT can be: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • smartphones, except when being used for talk and text. This questionnaire is concerned with ICT in schools and in particular the ICT resources (including computers) as well as pedagogical practices that use ICT. The questionnaire is addressed to ICT Coordinators who are asked to provide information about their schools. It is important that the person responding knows about the ICT facilities in your school and about practices regarding their use. The questionnaire should be completed by the person with designated responsibility for ICT in the school. If there is no person with designated responsibility for ICT in the school, the questionnaire should be completed by the principal or assistant principal. Since your school has been selected as part of a nationwide sample, your responses are very important in helping to evaluate the questions as relevant to describing eighth-grade education in the United States. If you do not have the information to answer particular questions, then please consult other persons in your school. In this questionnaire you will find questions about your position as ICT Coordinator; ICT resources in your school; and support for ICT use in your school. Since ICILS is an international study and all countries are using the same questionnaire, you may find that some of the questions seem unusual or are not entirely relevant to you or schools in the United States. Nevertheless, it is important that you do your best to answer all the questions as accurately as you can so comparisons can be made across countries in the study. It is estimated that you will need about 15 minutes to complete the questionnaire. **We appreciate the time and effort this takes and thank you for your cooperation and contribution.**	

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ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
	The National Center for Education Statistics (NCES) is authorized to collection information from the questionnaire under the Education Science Reform Act of 2002 (ESRA), 20 U.S. Code, § 9543. You do not have to provide the information requested. However, the information you provide will help the U.S. Department of Education's ongoing efforts to understand better how the educational system in the United States compares to that in other countries. There are no penalties should you choose not to participate in this study. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S. Code, § 9573). Your responses will be combined with those from other participants to produce summary statistics and reports. Thank You.	
[smartphones]	smartphones	Intro
The questionnaire should be completed by the person with designated responsibility for ICT in the school. If there is no person with designated responsibility for ICT in the school, the questionnaire should be completed by the principal or [deputy-principal].	assistant principal	Intro
[target grade]	eighth grade	ICTQ3, ICTQ6, ICTQ9, ICTQ10, ICTQ14, ICTQ15
Please indicate the availability of each of the following software resources at your school. Practice programs or [apps] where teachers decide which questions are asked of students (e.g. [Quizlet, Kahoot], [mathfessor])	apps	ICTQ5a
Practice programs or [apps] where teachers decide which questions are asked of students (e.g. [Quizlet, Kahoot], [mathfessor])	Quizlet, Kahoot	ICTQ5a
single user digital learning games (e.g. [languages online])	languages online, Garageband	ICTQ5b
Multi-user digital learning games with graphics and inquiry tasks (e.g. [Quest Atlantis])	Quest Atlantis	ICTQ5c
Word-processor software (e.g. [Microsoft Word ®],	Microsoft Word ®	ICTQ5d
Presentation software (e.g. [Microsoft PowerPoint ®])	Microsoft PowerPoint ®	ICTQ5e
Video and photo software for capture and editing (e.g. [Windows Movie Maker, iMovie,	Windows Movie Maker, iMovie, Adobe Photoshop	ICTQ5f

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
Adobe Photoshop])		
Concept mapping software (e.g. [Inspiration ®], [Webspiration ®])	Inspiration Maps ®, Webspiration ®	ICTQ5g
Data logging and monitoring tools (e.g. [Logger Pro]) that capture real-world data digitally for analysis (e.g. speed, temperature)	Logger Pro	ICTQ5h
Simulations and modelling software (e.g. [NetLogo])	NetLogo	ICTQ5i
A learning management system (e.g. [Edmodo], [Blackboard])	Edmodo, Blackboard, Moodle	ICTQ5j
e-portfolios (e.g. [VoiceThread])	VoiceThread	ICTQ5l
Social media (e.g. [Facebook, Twitter])	Facebook, Twitter	ICTQ5n
Please indicate the availability of the following technology facilities at [target grade]. Internet-based applications for collaborative work (e.g. [Google Docs ®])	Google Docs ®, Padlet, Onenote ®	ICTQ6d
A learning management system (e.g. [WebCT ®],[Moodle])	Edmodo, Blackboard, Moodle	ICTQ6e
Does your school or [educational authority] provide teachers with their own portable digital device?	School district or relevant education authority	ICTQ8
At your school, who provides [routine/day-to-day] technical ICT support? **At your school, who provides [routine/day-to-day] pedagogical ICT support for teachers?**	day-to-day	ICTQ11, ICTQ12
Is [computing, computer science, information technology, informatics or similar] taught as a standalone subject at the [target grade] in your school?	computing, computer science, information technology, informatics or similar eighth grade	ICTQ14, ICTQ15
Develop algorithms (e.g. instructions for a program like [Scratch])	Scratch	ICTQ15a

2. New Items

Item Number	Added Item
ICTQ7b	**Approximately, what percentage of all ICT devices in the school (include all types) are connected to the Internet?**
ICTQ7c	**In your school, about how many (school-provided) smart boards or interactive whiteboards are available?** (*Please record a whole number. Record 0 (zero), if none.*) _____ Smart boards / interactive white boards
ICTQ8	**Does your school or [educational authority] provide teachers with their own portable digital device?** (*Please mark only one choice*) • Yes, for every teacher

	• Yes, but not for all teachers • No
ICTQ14	**Is [computing, computer science, information technology, informatics or similar] taught as a standalone subject at the [target grade] in your school?** Yes Please continue with question 15 No Please go to the end of the questionnaire
ICTQ15	**In the teaching of [computing, computer science, information technology, informatics or similar] at the [target grade] in your school, how much emphasis is given to the following tasks?** *(Please mark one choice in each row)* a) Develop algorithms (e.g. instructions for a program like [Scratch]) b) Design information systems c) Write computer programs d) Evaluate computer programs e) Develop applications f) Refine computer code to improve efficiency g) Debug computer code h) Build electronic devices i) Develop simulations j) Test solutions to problems using simulations k) Create visual displays of information or processes (such as graphs, flow charts and decision trees)

3. Revised Items

2018 FT Draft International Version		2018 FT Final International Version	
Item Number	**Item**	**Item Number**	**Revised Item**
Intro	In this questionnaire you will find questions about: • Your position as ICT coordinator • Resources for ICT in your school • Support for ICT use in your school,	Intro	*Note: Reordered intro and added paragraph* In this questionnaire ICT can be: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • [smartphones], except when being used for talk and text. In this questionnaire you will find questions about: • Your position as ICT coordinator • ICT resources in your school • Support for ICT use in your school.

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ICTQ8 ICTQ9 ICTQ10 ICTQ11 ICTQ12		ICTQ9 ICTQ10 ICTQ11 ICTQ12 ICTQ13	*Note: renumbered items*
ICTQ4, ICTQ5, ICTQ6	• *Available to teachers and students* • *Available to teachers only* • *Not available*	ICTQ4, ICTQ5, ICTQ6	*Note: Response category added and responses slightly modified* • *Available to teachers <u>and</u> students* • *Available only to teachers* • *Available only to students* • *Not available*
ICTQ3	**How many years has your school been using computers for teaching and/or learning purposes for students in [target grade]?**	ICTQ3	*Note: Changed stem wording slightly* **How many years has your school been using ICT for teaching and/or learning purposes for students in [target grade]?**
ICTQ4	a) Computer-based offline information resources (e.g. digital textbooks) b) Interactive digital learning resources (e.g. learning objects) c) Access to the World Wide Web d) Access to an education site or network maintained by an education system e) Mail accounts	ICTQ4	*Note: Wording of the answer dimensions have changed.* a) Digital learning resources that can be accessed offline b) Digital learning resources that can only be used online c) Access to the Internet through the school network d) Access to an education site or network maintained by education authorities e) Email accounts for school-related use
ICTQ5	a) Tutorial software or [practice programs] b) Digital learning games c) Word-processing, databases, spreadsheets (e.g. [Microsoft© office suite]) d) Multimedia production tools (e.g. media capture and editing, web	ICTQ5	*Note: Wording of the answer dimensions have changed and new dimensions added.* a) Practice programs or [apps] where teachers decide which questions are asked of students (e.g. [Quizlet, Kahoot], [mathfessor]) b) Single user digital learning games (e.g. [languages online]) c) Multi-user digital learning games with

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	production) e) Data-logging and monitoring tools f) Simulations and modelling software g) Presentation software (e.g. [Microsoft PowerPoint ®], [Keynote ®]) h) Graphing or drawing software		graphics and inquiry tasks (e.g. [Quest Atlantis]) d) Word-processor software (e.g. [Microsoft Word ®], e) Presentation software (e.g. [Microsoft PowerPoint ®]) f) Video and photo software for capture and editing (e.g. [Windows Movie Maker, iMovie, Adobe Photoshop]) g) Concept mapping software (e.g. [Inspiration ®], [Webspiration ®]) h) Data logging and monitoring tools (e.g. [Logger Pro]) that capture real-world data digitally for analysis (e.g. speed, temperature) i) Simulations and modelling software (e.g. [NetLogo]) j) A learning management system (e.g. [Edmodo], [Blackboard]) k) Graphing or drawing software l) e-portfolios (e.g. [VoiceThread]) m) Digital contents linked with textbooks n) Social media (e.g. [Facebook, Twitter])
ICTQ6	e) A learning management system (e.g. [WebCT®])	ICTQ6	*Note: Answer dimensions have been modified and new ones added* e) A learning management system (e.g. [WebCT ®], [Moodle]) f) A 3D printer g) Programmable physical agents (e.g. robots) h) Access to a wireless LAN (Wi-fi)

ICTQ7	**In your school, approximately how many (school-provided) computers are:**
	
	(Please record a whole number. Record 0 (zero), if none.)
	
	For this question please:
	
	• Count terminals (if they have a keyboard and a screen) as computers
	
	• Count laptops, netbooks and tablet devices as computers
	
	• Exclude computers which are not in use
	
	• Exclude computers which are only used as servers
	
	    o In the school altogether?
	
	    o Available to students?
		ICTQ7a	*Note: Q7 is divided into three items in the November version. Response categories and answer dimensions changed.*
			
			In your school, approximately how many of the following types of (school-provided) ICT devices are available?
			
			(Please record a whole number. Record 0 (zero), if none.)
			
			For this question please:
			
			• Count terminals (if they have a keyboard and a screen) as computers
			
			• Exclude computers that are not in use (e.g. in storage)
			
			• Exclude computers that are only used as servers

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	o Connected to the Internet/World Wide Web?		o Desktop computers o Laptops/notebooks o Tablet devices

ICTQ8	**Do students at the [target grade] use portable computers (laptops, netbooks or tablet devices) at school?**
	
	(Please mark one choice in each row)
	
	• All students
	
	• Some students
	
	• No students
	
	  a) Students are provided with portable computers for use at home and at school
	
	  b) Students are provided with portable computers for use at school only
	
	  c) Students are required to provide their own portable computers for use at school
		ICTQ9	*Note: Changed stem, response categories, and wording of dimensions*
			
			Approximately what percentage of students at the [target grade] have access to portable computers (laptops, netbooks or tablet devices) at school?
			
			(Please mark one choice in each row)
			
			• 0 to 25%
			
			• 26 to 50%
			
			• 51 to 75%
			
			• 76 to 100%
			
			  a) Students provided with portable computers for use at school only
			
			  b) Students provided with portable computers for use at home and at school
			
			  c) Students bringing their own portable computers for use at school

ICTQ9	**Where are school computers for teaching and learning in [target grade] located?**
	
	  a. In most classrooms (80% or more)
		ICTQ10	*Note: Modified wording of stem and some dimensions; also added dimension*
			
			Where are school ICT devices for teaching and learning in [target grade] located?
			
			  a. In most (80% or more) classrooms
			
			  e. They are brought by students to class

ICTQ10	**At your school, who provides regular technical ICT support?** f) Staff from the education system to which the school belongs h) Students trained as [assistants]	ICTQ11	*Note: Modified wording of stem and answer dimensions* **At your school, who provides [routine/day-to-day] technical ICT support?** f) Staff from the relevant education authority responsible for the school h) Students from this school
ICTQ11	**At your school, who provides regular pedagogical ICT support for teachers?** f) Staff from the education system to which the school belongs	ICTQ12	*Note: Modified wording of stem and an answer dimension* **At your school, who provides [routine/day-to-day] pedagogical ICT support for teachers?** f) Staff from the relevant education authority responsible for the school
ICTQ12	**To what extent is the use of ICT in teaching and learning in this school**	ICTQ13	*Note: Modified wording of stem and answer dimensions*

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	hindered by each of the following obstacles? *(Please mark one choice in each row)* a) Too few computers connected to the Internet e) Poorly maintained ICT equipment g) Lack of ICT skills among teachers i) Lack of effective professional learning resources for teachers k) Lack of incentives for teachers to integrate ICT use in their teaching m) Lack of technical ICT support n) Lack of pedagogical support for the use of ICT		**To what extent is the use of ICT in teaching and learning at your school hindered by each of the following obstacles?** *(Please mark one choice in each row)* a) Too few computers with an Internet connection e) Problems in maintaining ICT equipment g) Insufficient ICT skills among teachers i) Insufficient effective professional learning resources for teachers k) Insufficient incentives for teachers to integrate ICT use in their teaching m) Insufficient technical ICT support n) Insufficient pedagogical support for the use of ICT

C. Teacher Questionnaire

1. Adaptation of all items

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
[Introduction for Teachers to the questionnaire]	**Teacher** Questionnaire	Intro header
This questionnaire is concerned with Information and Communication Technology (ICT) in schools, its use in teaching and learning, and students' development of Computer and Information Literacy (CIL). In this questionnaire, ICT can refer to: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • [smartphones], except when being used for talk and text. In this questionnaire you will find questions about: • Your background and familiarity with ICT • Your use of ICT in teaching a reference [target grade] class • The use of ICT in the school • Learning to use ICT in teaching. Some questions focus on a nominated 'reference' class.	Your school has agreed to participate in the 2017 Field Test for the International Computer and Information Literacy Study (ICILS). ICILS is an educational research project sponsored by the International Association for the Evaluation of Educational Achievement (IEA). The purpose of ICILS is to examine across different countries the extent to which young people in eighth grade have developed computer and information literacy, which is defined as the ability to use Information and Communications Technology (ICT) to investigate, create, and communicate with others at home, school, the workplace and in society in order to improve teaching and learning worldwide. In this questionnaire ICT can refer to: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • smartphones, except when being used for talk and text. This questionnaire is addressed to teachers who are asked	

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
This is the first [target grade] class that you teach for a regular subject (i.e. other than home room, assembly) on or after the Tuesday following the last weekend before you first accessed this questionnaire. You may, of course, teach the class at other times during the week as well. If you did not teach a [target grade] class on that Tuesday, please use the [target grade] class that you taught on the first day after that Tuesday. Please answer as accurately as you can. You will mostly answer by clicking on a button. You can change your responses at any time until you have clicked on 'I've finished' at the end of the questionnaire. We have estimated that it will take less than 30 minutes of your time to complete the questionnaire. Thank you for making that time available.	to provide information about ICT in their schools, its use in teaching and learning, and students' development of Computer and Information Literacy (CIL). Since your school has been selected as part of a nationwide sample, your responses are very important in helping to evaluate the questions as relevant to describing eighth-grade education in the United States. In this questionnaire you will find questions about your background and familiarity with ICT; your use of ICT in teaching a reference eighth-grade class; the use of ICT in the school; and learning to use ICT in teaching. Some questions focus on a nominated 'reference' class. This is the first eighth-grade class that you teach for a regular subject (i.e. other than home room or assembly) on or after the Tuesday following the last weekend before you first accessed this questionnaire. You may, of course, teach the class at other times during the week as well. If you did not teach an eighth-grade class on that Tuesday, please use the eighth-grade class that you taught on the first day after that Tuesday. Since ICILS is an international study and all countries are using the same questionnaire, you may find that some of the questions seem unusual or are not entirely relevant to you or schools in the United States. Nevertheless, it is important that you do your best to answer all the questions as accurately as you can so comparisons can be made across countries in the study. It is estimated that you will need about 30 minutes to complete the questionnaire. **We appreciate the time and effort this takes and thank you for your cooperation and contribution.** The National Center for Education Statistics (NCES) is authorized to collection information from the questionnaire under the Education Science Reform Act of 2002 (ESRA), 20 U.S. Code, § 9543. You do not have to provide the information requested. However, the information you provide will help the U.S. Department of Education's ongoing efforts to understand better how the educational system in the United States compares to that in other countries. There are no penalties should you choose not to participate in this study. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S. Code, § 9573). Your responses will be combined with those from other participants to produce summary statistics and reports. Thank You.	
[smartphones]	smartphones	Intro
[target grade]	eighth grade, eighth-grade	Intro, TQ4, TQ8, Section intro

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
(Please indicate the subjects that you teach in this school, indicating only those that individually account for at least [four lessons] each week in this school. The exact name of one or more of your subjects may not appear in the list for each category. If it does not, please mark the category you think best fits the subject.)	four classes or two classes if block scheduling is used	TQ3
What are the main subjects that you teach in this school in the current school year? [Language arts: test language]	English Language Arts	TQ3, TQ8
[Language arts: foreign or other national languages]	Spanish, or other foreign language	TQ3, TQ8
[Information technology, computer studies or similar]	Information technology, computer studies or similar	TQ3, TQ8
How well can you do these tasks on ICT? Use a spreadsheet program (e.g. [Lotus 1 2 3 ®, Microsoft Excel ®]) for keeping records or analyzing data	e.g. Microsoft Excel ®	TQ7f
Produce presentations (e.g. [Microsoft PowerPoint®] or a similar program) with simple animation functions	e.g. Microsoft PowerPoint ®	TQ7h

Collaborate with others using shared resources such as [Google Docs ®] [Padlet]	Collaborate with others using shared resources such as Google Docs ®, Padlet, Onenote ®	TQ7m
Use a learning management system (e.g. [Moodle], [Blackboard], [Edmodo])	e.g. Moodle, Blackboard, Edmodo)	TQ7o
How often do you use ICT with the following practices when teaching your reference class? The communication with parents or [guardians] about students' learning	guardians	TQ11j
Practice programs or apps where you ask students questions (e.g. [Quizlet, Kahoot], [mathfessor])	Quizlet, Kahoot	TQ12a
Single user digital learning games (e.g. [languages online])	languages online, Garageband	TQ12b
Multi-user digital learning games with graphics and inquiry tasks (e.g. [Quest Atlantis])	Quest Atlantis	TQ12c
Word-processor software (e.g. [Microsoft Word ®]	Microsoft Word ®	TQ12d
Presentation software (e.g. [Microsoft PowerPoint ®])	Microsoft PowerPoint ®	TQ12e
Spreadsheets (e.g. [Microsoft Excel ®])	Microsoft Excel ®	TQ12f
Video and photo software for capture and editing (e.g. [Windows Movie Maker, iMovie, Adobe Photoshop])	Windows Movie Maker, iMovie, Adobe Photoshop	TQ12g

ICILS 2018 US Field Test		
International term	**U.S. adaptation**	**Item(s)**
Concept mapping software (e.g. [Inspiration ®], [Webspiration ®])	e.g. Inspiration Map ®, Webspiration ®	TQ12h
Data logging and monitoring tools (e.g. [Logger Pro])	Logger Pro	TQ12i
Simulations and modelling software (e.g. [NetLogo])	NetLogo	TQ12j
A learning management system (e.g. [Edmodo], [Blackboard])	e.g. Edmodo, Blackboard, Moodle	TQ12k
Collaborative software (e.g. [Google Docs ®], [Onenote]) [Padlet]	e.g. Google Docs ®, Onenote ®, Padlet	TQ12m
e-portfolios (e.g. [VoiceThread])	e.g. VoiceThread	TQ12q
Social media (e.g. [Facebook, Twitter])	e.g. Facebook, Twitter	TQ12s
To what extent do you agree or disagree with the following statements about the use of ICT in teaching at your school? My school has access to sufficient digital learning resources (e.g. learning software or [apps]).	apps	TQ15c
Did your [initial teacher education] include the following elements?	Bachelor's degree	TQ17
How often have you participated in any of the following professional learning activities in the past two years? A course on use of ICT for [students with special needs or specific learning difficulties]	students with disabilities	TQ18h

2. New Items

Item Number	Added Text/Item
TQ17	**LEARNING TO USE ICT IN TEACHING** **Did your [initial teacher education] include the following elements?** *(Please mark one choice in each row)* • *Yes* • *No* a. Learning how to use ICT b. Learning how to use ICT in teaching

3. Deleted Text/Items

Item Number	Deleted Text/Item
TQ10	**Do you ever use ICT in the teaching and learning activities of the reference class?** *Yes No*
TQ19	**Do you teach a class at Grade 8 in [Information technology, computer studies or similar] in the current**

	school year?
	Yes Please continue with question 20
	No Please go to the end of the questionnaire

4. Revised Items

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Item Number	**Item**	**Item Number**	**Revised Item**
Intro	In this questionnaire you will find questions about: • Your background and familiarity with ICT • Your use of ICT in teaching a reference [target grade] class • The use of ICT in the school • Learning to use ICT in teaching. In this questionnaire a computer can refer to a: • desktop computer, • notebook or laptop computer, • netbook computer, • tablet device such as an [iPad] In this questionnaire a number of questions refer to the use of Information and Communications Technology (ICT). ICT refers to a wider range of digital technologies including, but not limited to, computers as defined above.	Intro	*Note: Changed order of paragraphs, added one bullet, and removed one paragraph.* In this questionnaire, ICT can refer to: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • [smartphones], except when being used for talk and text. In this questionnaire you will find questions about: • Your background and familiarity with ICT • Your use of ICT in teaching a reference [target grade] class • The use of ICT in the school • Learning to use ICT in teaching.
TQ7 TQ8 TQ9 TQ11 TQ12 TQ13 TQ14 TQ17 TQ18 TQ20 TQ21		TQ19 TQ7 TQ8 TQ12 TQ9 TQ10 TQ11 TQ18 TQ20 TQ13 TQ14	*Note: Renumbered items*
TQ3	Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) Human sciences/Humanities (history, geography, civic and citizenship education, law, economics etc.) Practical and vocational subjects (preparation for a specific occupation)	TQ3	*Note: Modified answer dimensions* Sciences (general science and/or physics, chemistry, biology, geology, earth sciences, technical science) Human sciences/Humanities/Social Studies (history, geography, civics, education, law, economics etc.) Practical and vocational subjects
TQ4	**In the current school year, how many schools are you teaching in at [target grade]?**	TQ4	*Note: Modified question* **In the current school year, at how many schools do you teach [target grade] students?**

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Item Number	**Item**	**Item Number**	**Revised Item**
Section Header	**YOUR USE OF COMPUTERS AND OTHER ICT**	Section Header	*Note: Modified section title* **YOUR USE OF ICT**
TQ5	**Approximately how long have you been using computers for teaching purposes?**	TQ5	*Note: Modified question* **Approximately how long have you been using ICT for teaching purposes?**
TQ6	**How often do you use a computer in these settings?**	TQ6	*Note: Modified question* **How often do you use ICT in these settings?**
TQ8	**How well can you do these tasks on a computer by yourself?** a. Producing a letter using a word-processing program b. E-mailing a file as an attachment c. Storing your digital photos d. Filing digital documents in folders and sub-folders e. Monitoring students' progress f. Using a spreadsheet program (e.g. [Lotus 1 2 3 ®, Microsoft Excel ®]) for keeping records or analysing data g. Contributing to a discussion forum/user group on the Internet (eg. a wiki or blog) h. Producing presentations (e.g. [Microsoft PowerPoint®] or a similar program), with simple animation functions i. Using the Internet for online purchases and payments j. Preparing lessons that involve the use of ICT by students k. Finding useful teaching resources on the Internet l. Assessing student learning m. Collaborating with others using shared resources such as [Google Docs®] n. Installing software o. Using a mobile computer device (e.g. tablet or smartphone) for email or messaging p. Using a learning management system (e.g. [moodle], [blackboard], [Edmodo])	TQ7	*Note: Changed question, tense of verb in each answer dimension and removed one answer dimension* **How well can you do these tasks on ICT?** a. Produce a letter using a word-processing program b. E-mail a file as an attachment c. Store your digital photos d. File digital documents in folders and sub-folders e. Monitor students' progress f. Use a spreadsheet program (e.g. [Lotus 1 2 3 ®, Microsoft Excel ®]) for keeping records or analyzing data g. Contribute to a discussion forum / user group on the Internet (e.g. a wiki or blog) h. Produce presentations (e.g. [Microsoft PowerPoint®] or a similar program) with simple animation functions i. Use the Internet for online purchases and payments j. Prepare lessons that involve the use of ICT by students k. Find useful teaching resources on the Internet l. Assess student learning m. Collaborate with others using shared resources such as [Google Docs ®] [Padlet] n. Install software o. Use a learning management system (e.g. [Moodle], [Blackboard], [Edmodo])
TQ9	Sciences (general science and/or physics, chemistry, biology, geology, earth sciences) Human sciences/Humanities/Social Studies (history, geography, civics and citizenship, education, law, economics etc.)	TQ8	*Note: Modified wording of answer dimensions* Sciences (general science and/or physics, chemistry, biology, geology, earth sciences, technical sciences) Human sciences/Humanities/Social Studies

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Item Number	**Item**	**Item Number**	**Revised Item**
	Practical and vocational subjects (preparation for a specific occupation)		(history, geography, civics, education, law, economics etc.) Practical and vocational subjects
TQ11	d. Word-processors or presentation software (e.g. [Microsoft Word ®], [Microsoft PowerPoint ®]) f. Video and photo software for (e.g. [Windows Movie Maker, iMovie]) capture and editing	TQ12	*Note: Changed wording of answer dimensions and split an answer dimension into two; also reordered most answer dimensions* d. Word-processor software (e.g. [Microsoft Word ®] e. Presentation software (e.g. [Microsoft PowerPoint ®]) g. Video and photo software for capture and editing (e.g. [Windows Movie Maker, iMovie, Adobe Photoshop]) r. Digital contents linked with textbooks s. Social media (e.g. [Facebook, Twitter])
TQ12	a. Accessing information efficiently b. Evaluating the relevance of digital information c. Displaying information for a given audience/purpose d. Evaluating the credibility of digital information e. Validating the accuracy of digital information f. Sharing digital information with others g. Using computer software to construct digital work products (e.g. presentations, documents, images and diagrams) h. Evaluating their approach to information searches i. Providing digital feedback on the work of others (such as classmates) j. Exploring a range of digital resources when searching for information k. Providing references for digital information sources l. Understanding the consequences of making information publically available online	TQ9	*Note: Changed verb tense of answer dimensions and removed one answer dimension* a. To access information efficiently b. To evaluate the relevance of digital information c. To display information for a given audience/purpose d. To evaluate the credibility of digital information e. To share digital information with others f. To use computer software to construct digital work products (e.g. presentations, documents, images and diagrams) g. To systematically evaluate the students' own approaches to information searches h. To provide digital feedback on the work of others (such as classmates) i. To explore a range of digital resources when searching for information j. To provide references for digital information sources k. To understand the consequences of making information publically available online
TQ13	**How often does your reference class use ICT in the following activities?** *(Please mark one choice in each row)* • *Does not engage in this activity*	TQ10	*Note: Changed question wording, added pronoun to response categories, changed verb tense of response categories and answer dimensions, and added/removed answer dimensions.* **How often do students in your reference class**

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Item Number	**Item**	**Item Number**	**Revised Item**
	• *Never uses ICT in this activity* • *Sometimes uses ICT in this activity* • *Often uses ICT in this activity* a. Working on a project over several weeks. b. Working on short assignments (i.e. within one week) c. Explaining and discussing ideas with other students d. Submitting completed work for assessment e. Working individually on learning materials at their own pace f. Undertaking open-ended investigations or field work g. Reflecting on their learning experiences (e.g. by using a learning log) h. Communicating with students in other schools on projects i. Seeking information from experts outside the school j. Planning a sequence of learning activities for themselves k. Analysing data l. Searching for information on a topic using outside resources m. Evaluating information resulting from a search n. Collecting data for a project o. Creating visual products or videos p. Creating music q. Sharing products with other students r. Producing animations s. Using a learning management system t. Engaging in role playing or simulations		**use ICT for the following activities?** *(Please mark one choice in each row)* • *They do not engage in this activity* • *They never use ICT in this activity* • *They sometimes use ICT in this activity* • *They often use ICT in this activity* • *They always use ICT in this activity* a. Work on extended projects (i.e. lasting over a week) b. Work on short assignments (i.e. within one week) c. Explain and discuss ideas with other students d. Submit completed work for assessment e. Work individually on learning materials at their own pace f. Undertake open-ended investigations or field work g. Reflect on their learning experiences (e.g. by using a learning log) h. Communicate with students in other schools on projects i. Seek information from experts outside the school j. Plan a sequence of learning activities for themselves k. Analyze data l. Search for information on a topic using outside resources m. Evaluate information resulting from a search n. Collect data for a project o. Create visual products or videos p. Produce or edit music q. Share products with other students r. Produce animations
TQ14	a. Presenting information through direct class instruction b. Providing remedial or enrichment support to individual students or small groups of students c. Enabling student-led whole-class discussions and presentations	TQ11	*Note: Changed verb tense of answer dimensions* a. The presentation of information through direct class instruction b. The provision of remedial or enrichment support to individual students or small groups of students c. The support of student-led whole-class

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	d. Assessing students' learning through tests e. Providing feedback to students on their work f. Reinforcing learning of skills through repetition of examples g. Organizing collaboration among students h. Mediating communication between students and experts or external mentors i. Enabling students to collaborate with other students (within or outside school) j. Communicating with parents or guardians about students' learning k. Supporting inquiry learning		discussions and presentations d. The assessment of students' learning through tests e. The provision of feedback to students on their work f. The reinforcement of learning of skills through repetition of examples g. The support of collaboration among students h. The mediation of communication between students and experts or external mentors i. The support of student collaboration with other students (within or outside school) j. The communication with parents or [guardians] about students' learning k. The support of inquiry learning
TQ15	c. My school does not have access to digital learning resources. d. My school has limited connectivity (e.g. slow or unstable speed) to the Internet. g. There is not sufficient provision for me to develop expertise in ICT. h. There is not sufficient technical support to maintain ICT resources. i. There is not enough support for pedagogical applications of ICT	TQ15	*Note: Changed wording of answer dimensions and added new answer dimensions* c. My school has access to sufficient digital learning resources (e.g. learning software or [apps]). d. My school has good connectivity (e.g. fast speed and stable) to the Internet. g. There is sufficient opportunity for me to develop expertise in ICT. h. There is sufficient technical support to maintain ICT resources. i. There is sufficient technical support to solve issues promptly when problems arise. j. There is enough support for the use of ICT in teaching and learning.
TQ16	**To what extent do you agree or disagree with the following statements about practices and principles regarding the use of ICT in teaching and learning by you and in general at your school?** b. There is a common set of rules in the school about how ICT should be used in classrooms. c. I systematically collaborate with colleagues to develop ICT based lessons based on the curriculum. d. I observe how other teachers use ICT in teaching. e. There is a common set of expectations in the school about what students will learn about	TQ16	*Note: Changed wording of question and answer dimensions; also added new answer dimension.* **To what extent do you agree or disagree with the following statements about your use of ICT in teaching and learning at your school?** b. I follow a common set of rules about how ICT should be used in classrooms. c. I collaborate with colleagues to develop ICT-based lessons. d. I observe how other teachers use ICT in teaching. e. I discuss with other teachers how to use ICT in teaching topics.

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Item Number	**Item**	**Item Number**	**Revised Item**
	ICT.		f. I share ICT-based resources with other teachers in my school.
TQ17	**How often have you participated in any of the following activities in the past two years?** a. Participated in a course on ICT applications (e.g. word processing, presentations, internet use, spreadsheets, databases) b. Participated in a course on integrating ICT into teaching and learning c. Participated in training on subject-specific ICT software d. Observed other teachers using ICT in teaching e. Participated in a course on subject-specific digital resources f. Participated in an ICT-mediated discussion or forum on teaching and learning g. Shared digital resources with others using a collaborative work space h. Used a collaborative workspace	TQ18	*Note: Changed wording of question, changed wording of answer dimensions, and added new answer dimensions.* **How often have you participated in any of the following professional learning activities in the past two years?** a. A course on ICT applications (e.g. word processing, presentations, internet use, spreadsheets, databases) b. A course on integrating ICT into teaching and learning c. Training on subject-specific digital teaching and learning resources d. Observations of other teachers using ICT in teaching e. An ICT-mediated discussion or forum on teaching and learning f. The sharing of digital teaching and learning resources with others through a collaborative workspace g. Use of a collaborative workspace to jointly evaluate student work h. A course on use of ICT for [students with special needs or specific learning difficulties] i. A webinar on ICT integration in teaching and learning j. Use of a student data management system k. Use of ICT to support personalized learning by students
TQ7	a. Enables students to access better sources of information b. Results in poorer written expression among students c. Helps students to consolidate and process information more effectively d. Only creates organisational problems for schools e. Helps students learn to collaborate with other students f. Impedes concept formation better done with real objects than computer images g. Enables students to communicate more effectively with others	TQ19	*Note: Changed answer dimensions, wording, order* a. impedes concept formation by students. b. helps students develop greater interest in learning. c. helps students to work at a level appropriate to their learning needs. d. encourages students to copy material from Internet sources. e. helps students develop problem solving skills. f. distracts students from learning. g. results in poorer written expression among students. h. results in poorer calculation and estimation

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	h. Only encourages copying material from published Internet sources i. Helps students develop greater interest in learning j. Helps students work at a level appropriate to their learning needs k. Limits the amount of personal communication among students l. Helps students develop skills in planning and self-regulation of their work m. Results in poorer calculation and estimation skills among students n. Improves academic performance of students o. Only distracts students from learning p. Helps teachers		skills among students. i. helps students learn to collaborate with other students. j. limits the amount of personal communication among students. k. enables students to communicate more effectively with others. l. introduces organizational problems for schools. m. helps teachers communicate with students. n. helps students develop skills in planning and self-regulation of their work. o. improves academic performance of students. p. enables students to access better sources of information. q. helps students to consolidate and process information more effectively.
TQ18	**Teachers often choose the emphasis that they place on different approaches to teaching and learning. Which priority do you think is more important in each of the pairs below?** a. The main role of a teacher is to facilitate students' own inquiry. The main role of a teacher is to demonstrate the correct way to do things. b. Instruction should be built around problems with clear, correct answers. Instruction should focus on students finding solutions to open-ended problems. c. It is better when students decide on the activities to be undertaken. It is better when the teacher – not the student – decides what activities are to be done. d. Knowledge of core content and principles is more important than thinking and reasoning processes. Thinking and reasoning processes are more important than knowledge of specific curriculum content. e. Students learn best by working through complex problems. Teaching should be based on direct instruction on ideas that most students can grasp quickly.	TQ20	*Note: Changed question wording, order of answer dimensions, answer dimensions wording, and added new answer dimension* **Teachers often have beliefs about the emphasis that they typically prefer to place on different approaches to teaching and learning. Which priority do you think is more important in each of the pairs below?** a. Instruction should be built around problems with clear, correct answers. Instruction should focus on students finding solutions to open-ended problems. b. The main role of a teacher is to facilitate students' own inquiry. The main role of a teacher is to demonstrate the correct way to do things. c. Students learn best by working through complex problems. Students learn best by progressing through sequences of simple elements of problems. d. Teaching should be based on direct instruction of ideas that most students can grasp quickly. Teaching should be based on supporting student exploration of complex ideas. e. Knowledge of content and principles in core subject areas. Developing general inquiry processes that will support lifelong learning.

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Item Number	**Item**	**Item Number**	**Revised Item**
			f. Students learn best when they decide on the activities to be undertaken in class. Students learn best when the teacher – not the students – decides what activities are to be done in class.
TQ20	**In your teaching of [Information technology, computer studies or similar] in the current school year, how much emphasis have you given to developing the following capabilities in your students?** a. Developing algorithms b. Designing information systems c. Writing computer programs (in any language) d. Using simulations to test problems e. Evaluating computer programs f. Developing applications g. Refining computer programs to improve their efficiency h. Debugging computer code i. Designing flow diagrams j. Interpreting flow diagrams k. Understanding digital systems l. Building electronic devices n. Testing solutions to systems problems	TQ13	**In your teaching of the reference class this school year, how much emphasis have you given to student learning of the following skills?** a. To display information in different ways b. To break a complex process into smaller parts c. To understand diagrams that describe or show real-world problems d. To plan tasks by setting out the steps needed to complete them e. To identify the most efficient solution to a problem f. To use tools making diagrams that help solve problems g. To use simulations to help understand or solve real-world problems h. To make flow diagrams to show the different parts of a process i. To record and evaluate data to understand and solve a problem j. To work with instructions to complete or describe tasks k. To use real-world data to review and revise solutions to problems
TQ21	**How confident are you about teaching the following topics in [Information technology, computer studies or similar]?** a. Developing algorithms b. Designing information systems c. Writing computer programs (in any language) d. Using simulations to test problems e. Evaluating computer programs f. Developing applications g. Refining computer programs to improve their efficiency h. Debugging computer code i. Designing flow diagrams j. Interpreting flow diagrams k. Understanding digital systems	TQ14	*Note: Changed question wording, order of answer dimensions, answer dimension wording, and removed answer dimensions.* **How confident do you feel about teaching the following skills to the reference class?** a. To display information in different ways b. To break a complex process into smaller parts c. To understand diagrams that describe or show real-world problems d. To plan tasks by setting out the steps needed to complete them e. To identify the most efficient solution to a problem f. To use tools to make diagrams that help solve problems g. To use simulations to help understand or solve

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Item Number	**Item**	**Item Number**	**Revised Item**
	l. Building electronic devices m. Testing solutions to systems problems		real-world problems h. To make flow diagrams to show the different parts of a process i. To record and evaluate data to understand and solve a problem j. To work with instructions to complete or describe tasks k. To use real-world data to review and revise solutions to problems

D. Student Questionnaire

1. **Adaptation of all items**

2018 Field Test		
International term	**U.S. adaptation**	**Item(s)**
Introduction for students to the Questionnaire	**Student** Questionnaire	
This questionnaire is about Information and Communication Technology (ICT). In this questionnaire ICT can refer to: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • [smartphones], except when being used for talk and text. In this questionnaire you will find questions about: • You, your home and your family • Where and how often you use ICT • What you use ICT for • Your views about the use of ICT. Please read each question carefully and answer as accurately as you can. In this questionnaire, you will mostly answer by clicking on a button. You can change your responses at any time until you have clicked on 'I've finished' at the end of the questionnaire. There are also a few questions where you will need to write a short response. **In this questionnaire, there are no right or wrong answers. Your answers should be the**	This questionnaire is about Information and Communication Technology (ICT). In this questionnaire ICT can refer to: • desktop computers • notebook or laptop computers • netbook computers • tablet devices • smartphones, except when being used for talk and text. In this questionnaire you will find questions about: • You, your home and your family • Where and how often you use ICT • What you use ICT for • Your views about the use of ICT. Please read each question carefully and answer as accurately as you can. In this questionnaire, you will mostly answer by clicking on a button. You can change your responses at any time until you have clicked on 'I've finished' at the end of the questionnaire. There are also a few questions where you will need to write a short response. **In this questionnaire, there are no right or wrong answers. Your answers should be the ones that apply to you.** You may ask for help if you do not understand something or if you are not sure how to answer a question.	

2018 Field Test		
International term	**U.S. adaptation**	**Item(s)**
ones that apply to you. You may ask for help if you do not understand something or if you are not sure how to answer a question. **All your answers will be kept confidential.**	The National Center for Education Statistics (NCES) is authorized to collection information from the questionnaire under the Education Science Reform Act of 2002 (ESRA), 20 U.S. Code, § 9543. You do not have to provide the information requested. However, the information you provide will help the U.S. Department of Education's ongoing efforts to understand better how the educational system in the United States compares to that in other countries. There are no penalties should you choose not to participate in this study. Your answers may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S. Code, § 9573). Your responses will be combined with those from other participants to produce summary statistics and reports. Thank you.	
[smartphones]	smartphones	Intro, SQ16d, SQ18c
What is the highest level of education you expect to complete? What is the highest level of education completed by your [parent or guardian 1]? What is the highest level of education completed by your [parent or guardian 2]? [ISCED level 6, 7, or 8] [ISCED level 4 or 5] [ISCED level 3] [ISCED level 2] [ISCED level 1]	 Master's degree or professional degree (MD, DDS, lawyer, minister) OR Doctorate (Ph.D., or EdD) Associate's degree (2-year college program) OR Bachelor's degree (4-year college program) High school graduate Some high school Less than high school	SQ3, SQ9, SQ13
[parent or guardian 1]	Parent or guardian 1	SQ4, SQ6, SQ7a, SQ7b, SQ8a,

2018 Field Test		
International term	**U.S. adaptation**	**Item(s)**
		SQ8b, SQ9
[parent or guardian 2]	Parent or guardian 2	S4, S10, S11a, S11b, S12a, S12b, S13
In what country were you and your parents born? <Country of test>	United States	SQ4
[Another country]	Another country	SQ4
What language do you speak at home most of the time? [Language of test]	English	SQ5
[Other language 1]	Spanish	SQ5
[Another language]	Another language	SQ5
[job]	job	SQ7a, SQ7b, SQ8a, SQ8b, SQ11a, SQ11b, SQ12a, SQ12b
What is your [parent or guardian 1]'s main [job] (for example, high school teacher, kitchen-hand, sales manager)? What is your [parent or guardian 2]'s main [job]?	(for example, school teacher, cook, sales manager)	SQ7a, SQ11a
What does your [parent or guardian 1] do in his/her main [job]? (for example teaches high school students, helps the cook prepare meals in a restaurant, manages a sales team) What does your [parent or guardian 2] do in his/her main [job]? (for example teaches high school students, helps the cook prepare meals in a restaurant, manages a sales team)	(for example, teaches high school students, helps prepare meals in a restaurant, manages a sales team)	SQ7b, SQ11b
What was your [parent or guardian 1]'s last main [job]? (for example high school teacher, kitchen-hand, sales manager) What was your [parent or guardian 2]'s last main [job]? (for example high school teacher, kitchen-hand, sales manager) What did your [parent or guardian 2] do in his/her	(for example, school teacher, cook, sales manager)	SQ8a, SQ12a

2018 Field Test		
International term	U.S. adaptation	Item(s)
last main [job]? (for example taught high school students, helped the cook prepare meals in a restaurant, managed a sales team)		
What did your [parent or guardian 1] do in his/her last main [job]? (for example taught high school students, helped the cook prepare meals in a restaurant, managed a sales team)	(for example, taught high school students, helped prepare meals in a restaurant, managed a sales team)	SQ8b, SQ12b
[test administrator]	test administrator	SQ9, SQ13
How often do you use ICT to read [e-books] in your home?	e-books	SQ15
How many of the following ICT are currently used in your home? [iPad, Tablet PC, Kindle]	iPad, Surface Pro, Kindle	SQ16c
[Smartphones]	Smartphone	SQ16d
How often do you use ICT for each of the following activities? [Microsoft Excel]	Microsoft Excel	SQ21b
[Microsoft PowerPoint]	Microsoft PowerPoint	SQ21c
[Logo, LUA, or Scratch]	Scratch, Logo, VBA, Java	SQ21e
[apps]	apps	SQ21f, SQ30i, SQ30n
How often do you use ICT to do each of the following communication activities? Talk to friends, family, or other people using voice or video chat (e.g. [Skype, WhatsApp, Viber])	Skype, FaceTime, WhatsApp, Viber	SQ22b
Ask questions on forums or [Q&A, question and answer] websites	Q&A, question and answer	SQ22e
Answer other peoples' questions on forums or [Q&A, question and answer] websites	Q&A, question and answer	SQ22f
Write posts for your own blog (e.g. [WordPress, Tumblr, Blogger])	(e.g. WordPress, Tumblr, Blogger)	SQ22g
Post images or video in social networks or online communities (e.g. [Facebook, Instagram or YouTube])	e.g. Facebook, Instagram or YouTube)	SQ22h
How often do you use ICT for the following school-related purposes? Complete [worksheets] or exercises	worksheets	SQ24e

2018 Field Test		
International term	**U.S. adaptation**	**Item(s)**
Use coding software to complete assignments (e.g. [Scratch, Minecraft])	e.g. Scratch, Minecraft	SQ24k
At school, how often do you use ICT during lessons in the following subjects or subject areas? [Language arts: test language]	English	SQ25a
[Language arts: foreign or other national languages]	Spanish or other foreign language	SQ25b
[Information technology, computer studies or similar]	Information technology, computer studies or similar	SQ25g
When studying throughout this school year, how often did you use the following tools during class? Tutorial software or [practice programs]	practice programs	SQ26a
Word-processing software (e.g. [Microsoft Word ®])	e.g. Microsoft Word ®	SQ26b
Presentation software (e.g. [Microsoft PowerPoint ®])	e.g. Microsoft Powerpoint ®	SQ26c
Spreadsheets (e.g. [Microsoft Excel®])	e.g. Microsoft Excel ®	SQ26d
Concept mapping software (e.g. [Inspiration ®], [Webspiration ®])	e.g. Inspiration Map ®, Webspiration ®	SQ26f
How well can you do each of these tasks when using ICT? Create a database (e.g. using [Microsoft Access ®])	e.g. using Microsoft Access ®	SQ30c
Create a computer program, macro, or [app] (e.g. in [Basic, Visual Basic])	app Scratch, Logo, VBA, Java	SQ30i
How much do you agree or disagree with the following statements about ICT? I would like to study subjects related to ICT after [secondary school]	high school	SQ31a
STUDYING [INFORMATION TECHNOLOGY]	STUDYING INFORMATION TECHNOLOGY	SQ33
Do you study [computing, computer science, information technology, informatics or similar] in the current school year?	computing, computer science, information technology, informatics or similar	SQ35

2. New Items

Item Number	Added Text/Item

SQ29	**At school, have you learned about the importance of the following topics?**
	
	(Please mark one choice in each row)
	
	    • *Yes*
	    • *No*

	a) To keep anti-virus software on computers up-to-date
	b) To change passwords regularly (e.g. network account, email, social media)
	c) To check the origin of emails before opening attachments
	d) To log out of a shared computer at the end of a session
	e) To use social media responsibly (e.g. what types of information you share about yourself or other people)

3. Revised Items

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Item Number	**Item**	**Item Number**	**Revised Item**
Intro	**[Introduction for students to the questionnaire]** In this questionnaire you will find questions about: - You, your home and your family - Where and how often you use digital devices - What you use digital devices for - Your views about the use of computers. In this questionnaire a digital device can refer to a: - desktop computer, - notebook or laptop computer, - netbook computer, - tablet device such as an iPad - [smartphone].	Intro	*Note: Introduction order and wording changed* **Introduction for students to the questionnaire** This questionnaire is about Information and Communication Technology (ICT). In this questionnaire ICT can refer to: - desktop computers - notebook or laptop computers - netbook computers - tablet devices - [smartphones], except when being used for talk and text. In this questionnaire you will find questions about: - You, your home and your family - Where and how often you use ICT - What you use ICT for - Your views about the use of ICT.
SQ7c SQ7d SQ8 SQ9 SQ10a SQ10b SQ10c SQ10d		SQ8a SQ8b SQ9 SQ10 SQ11a SQ11b SQ12a SQ12b	*Note: Renumbered items*

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Item Number	**Item**	**Item Number**	**Revised Item**
SQ11		SQ13	
SQ12		SQ14	
SQ13		SQ15	
SQ14		SQ16	
SQ15		SQ17	
SQ16		SQ18	
SQ17		SQ20	
SQ18		SQ21	
SQ19		SQ22	
SQ20		SQ23	
SQ21		SQ24	
SQ22		SQ25	
SQ23		SQ28	
SQ24		SQ19	
SQ25		SQ30	
SQ26		SQ31	
SQ27		SQ32	
SQ28		SQ26	
SQ29		SQ27	
SQ30		SQ35	
SQ31		SQ33	
SQ32		SQ34	
SQ3	**Which of the following [levels of education] do you expect to complete?**	SQ3	*Note: Changed stem* **What is the highest level of education you expect to complete?**
Section intro	Some of these questions will be about home and your mother and father or guardians who look after you — for example, step-parents or foster-parents. If you share your time with more than one set of parents or guardians, please answer the following questions for those parents/guardians you spend the most time with.	Section intro	*Note: Changed instructions* Some of these questions will be about home and your parents or guardians who look after you — for example, step-parents or foster-parents. Select one parent or guardian as [parent or guardian 1] and the other as [parent or guardian 2]. If you share your time with more than one set of parents or guardians, please answer the following questions for those parents/guardians with whom you spend the most time. If you share your time only with one parent, please answer only the following questions for this parent.
SQ4	• You • Mother or [female guardian] • Father or [male guardian]	SQ4	*Note: Changed wording of answer dimensions* • You

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Item Number	**Item**	**Item Number**	**Revised Item**
			• [Parent or guardian 1] • [Parent or guardian 2]
SQ6	**Does your mother or [female guardian] work in a paid job?**	SQ6	*Note: Changed wording* **Does your [parent or guardian 1] work in a paid job?**
SQ7a	**What is your mother's or [female guardian's] main [job]?**	SQ7A	*Note: Changed wording* **What is your [parent or guardian 1]'s main [job]?**
SQ7b	**What does your mother or [female guardian] do in her main [job]?**	SQ7B	*Note: Changed wording* **What does your [parent or guardian 1] do in his/her main [job]?**
SQ7c	**What was your mother's or [female guardian's] last main [job]?**	SQ8A	*Note: Changed wording* **What was your [parent or guardian 1]'s last main [job]?**
SQ7d	**What did your mother or [female guardian] do in her last main [job]?**	SQ8b	*Note: Changed wording* **What did your [parent or guardian 1] do in his/her last main [job]?**
SQ8	**What is the highest level of education completed by your mother or [female guardian]?**	SQ9	*Note: Changed wording* **What is the highest level of education completed by your [parent or guardian 1]?**
SQ9	**Does your father or [male guardian] work in a paid job?**	SQ10	*Note: Changed wording* **Does your [parent or guardian 2] work in a paid job?**
SQ10a	**What is your father's or [male guardian's] main [job]?**	SQ11a	*Note: Changed wording* **What is your [parent or guardian 2]'s main [job]?**
SQ10b	**What does your father or [male guardian] do in his main [job]?**	SQ11b	*Note: Changed wording* **What does your [parent or guardian 2] do in his/her main [job]?**
SQ10c	**What was your father's or [male guardian's] last main [job]?**	SQ12a	*Note: Changed wording* **What was your [parent or guardian 2]'s last main [job]?**
SQ10d	**What did your father or [male guardian] do in his last main [job]?**	SQ12b	*Note: Changed wording* **What did your [parent or guardian 2] do in his/her last main [job]?**
SQ11	**What is the highest level of education completed by your father or[male guardian]?**	SQ13	*Note: Changed wording* **What is the highest level of education completed by your [parent or guardian 2]?**
SQ12	**About how many books are there in your home?** *Do not count magazines, newspapers, comic books or your schoolbooks.*	SQ14	*Note: Changed instructions* **About how many books are there in your home?** *There are usually about 40 books per metre of shelving. Do not count magazines, newspapers, comic books or your schoolbooks.*
SQ13	**How often are digital devices used**	Q15	*Note: Changed stem and response categories*

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Item Number	**Item**	**Item Number**	**Revised Item**
	to read [e-books] in your home? *(Please mark only once choice)* • Never or hardly ever • At least once a month but not every week • At least once a week		**How often do you use ICT to read [e-books] in your home?** *(Please mark only one choice)* • Never or hardly ever • At least once a month but not every week • At least once a week but not every day • Every day
SQ14	**How many of the following digital devices are currently used in your home?**	**SQ16**	*Note: Changed stem* **How many of the following ICT are currently used in your home?**
Section Header	**YOUR USE OF COMPUTERS AND INTERNET**	Section Header	**YOUR USE OF ICT**
SQ16	**How long have you been using each of the following digital devices?** a) Desktop or portable computers b) Tablets (e.g. [iPad, Tablet PC]) c) [Smartphones]	SQ18	*Note: Changed word of stem and answer dimensions* **How long have you been using each of the following ICT?** a) Desktop or portable computers b) Tablet devices c) [Smartphones] except for using text and calling
SQ17	**How often do you use a computer or tablet device in these places?**	SQ20	*Note: Modified stem and instructions* **How often do you use ICT in these places?** *Please do not count the use of smartphones when making phone calls or writing text messages.*
SQ18	**How often do you do each of the following activities using a digital device?** a) Writing or editing text b) Using a spreadsheet to do calculations, store data or plot graphs (e.g. using [Microsoft EXCEL ®]) c) Creating a simple "slideshow" presentation (e.g. using [Microsoft PowerPoint ®])	SQ21	*Note: Changed verb tense of answer dimensions and removed an answer dimension; also modified stem.* **How often do you use ICT for each of the following activities?** a) Write or edit documents b) Use a spreadsheet to do calculations, store data or plot graphs (e.g. using [Microsoft Excel ®]) c) Create a simple "slideshow" presentation (e.g. using [Microsoft PowerPoint ®])

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Item Number	**Item**	**Item Number**	**Revised Item**
	d) Recording and editing videos		d) Record or edit videos
	e) Writing computer programs, scripts or apps (e.g. using [Logo, LUA, or Scratch])		e) Write computer programs, scripts or apps (e.g. using [Logo, LUA, or Scratch])
	f) Using drawing, painting or graphics software		f) Use drawing, painting or graphics software or [apps]
	g) Producing and editing music		g) Produce or edit music
	h) Fixing problems on computers		h) Build or edit a webpage
	i) Building or editing a webpage		
SQ19	**How often do you do each of the following communication activities?**	SQ22	*Note: Changed wording of stem and answer dimensions; also added answers*
	a) Publishing results from games, sports, or other events on social media		**How often do you use ICT to do each of the following communication activities?**
	b) Talking to friends, family, or other people using voice chat (e.g. [Skype, WhatsApp, Viber])		a) Share news from current events on social media
	c) Writing posts and updates about what happens in your life on social media		b) Talk to friends, family, or other people using voice or video chat (e.g. [Skype, WhatsApp, Viber])
	d) Asking questions on forums or [Q&A, question and answer] websites		c) Send texts or instant messages to friends, family, or other people
	e) Answering other peoples' questions on forums or [Q&A, question and answer] websites		d) Write posts and updates about what happens in your life on social media
	f) Writing posts for your own blog (e.g. [Wordpress, Tumblr, Blogger])		e) Ask questions on forums or [Q&A, question and answer] websites
	g) Posting images or video in social networks or online communities (e.g. [Facebook, Instagram or Youtube])		f) Answer other peoples' questions on forums or [Q&A, question and answer] websites
	h) Watching videos or images that other people have posted online		g) Write posts for your own blog (e.g. [WordPress, Tumblr, Blogger])
	i) Tagging others in posts or images		h) Post images or video in social networks or online communities (e.g. [Facebook, Instagram or YouTube])
			i) Watch videos or images that other people have posted online
			j) Tag others online in posts or images on social media
			k) Send or forward information about events or activities to other people
SQ20	**How often do you do each of the following leisure activities?**	SQ23	*Note: Changed wording of stem, verb tense of answer dimension, and added/removed an answer dimension*
	a) Searching the Internet to find out about places to go or activities to do		**How often do you use ICT to do each of the following leisure activities?**
	b) Reading reviews on the Internet of things you might want to buy		a) Search the Internet to find information about places to go or activities to do
	c) Reading news stories on the Internet		b) Read reviews on the Internet of things you might want to buy
	d) Searching for online information		

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Item Number	**Item**	**Item Number**	**Revised Item**
	about things you are interested in		c) Read news stories on the Internet
	e) Reading posts or websites about things you are interested in		d) Search for online information about things you are interested in
	f) Using websites, forums, or videos to find out how to do something		e) Read posts or websites about things you are interested in
	g) Sending information about events or activities to other people		f) Use websites, forums, or online videos to find out how to do something
	h) Playing single-player games on a digital device		g) Play single-player games
	i) Playing multi-player games using separate devices to the other player(s)		h) Play multi-player games using the same device as the other player(s)
	j) Playing multi-player games using the same device as the other player(s)		i) Play multi-player games where each player uses his/her individual device
	k) Listening to downloaded or streamed music		j) Listen to downloaded or streamed music
	l) Watching downloaded or streamed TV shows or movies		k) Watch downloaded or streamed TV shows or movies
			l) Buy things online
SQ21	**How often do you use digital devices for the following school-related purposes?** a) Preparing reports or essays b) Preparing presentations c) Working online with other students from your own school d) Working online with other students from other schools e) Completing [worksheets] or exercises f) Organising your time and work g) Writing about your learning h) Completing tests i) Using education software (e.g. mathematics or language learning software) j) Using the Internet to search for information	SQ24	*Note: Changed verb tense of answer dimension and added answer* **How often do you use ICT for the following school-related purposes?** a) Prepare reports or essays b) Prepare presentations c) Work online with other students from your own school d) Work online with other students from other schools e) Complete [worksheets] or exercises f) Organize your time and work g) Write about your learning h) Complete tests i) Use software or applications to learn skills or a subject (e.g. mathematics tutoring software, language learning software) j) Use the Internet to search for information k) Use coding software to complete assignments (e.g. [Scratch, Minecraft])
SQ22	**At school, how often do you use digital devices during lessons in the following subjects or subject areas?** e) Human sciences/Humanities (history, geography, civics, law, economics etc.)	SQ25	*Note: Changed wording of stem and answer dimension; split an answer into two* **At school, how often do you use ICT during lessons in the following subjects or subject areas?**

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	h) Other (practical or vocational subjects, moral/ethics, physical education, home economics, personal and social development)		e) Human sciences /Humanities / Social studies (history, geography, civics, law, economics, etc.) h) Practical or vocational subjects i) Other (moral/ethics, physical education, home economics, personal and social development)
SQ23	a) Providing references to Internet sources b) Searching for information using a digital device c) Presenting information for a given audience or purpose using a computer d) Working out whether to trust information from the Internet e) Deciding what information is relevant to include in school work f) Organising information obtained from Internet sources g) Deciding where to look for information about an unfamiliar topic h) Looking for different types of digital information on a topic i) Writing a computer program or app j) Setting up or editing a website	SQ28	*Note: Changed verb tense of answer dimensions and deleted an answer* a) Provide references to Internet sources b) Search for information using ICT c) Present information for a given audience or purpose using ICT d) Work out whether to trust information from the Internet e) Decide what information obtained from the Internet is relevant to include in school work f) Organize information obtained from Internet sources g) Decide where to look for information on the Internet about an unfamiliar topic h) Look for different types of digital information on a topic i) Build or edit a webpage
SQ24	**Who mainly taught you the following things?** a) Communicating over the Internet b) Creating documents for school work c) Changing computer settings e) Working in a computer network	SQ19	*Note: Changed wording of stem and answer dimensions; also added/deleted answers* **Who mainly taught you how to do the following activities?** a) Communicate over the Internet b) Create or edit documents c) Create or edit presentations d) Change settings on an ICT device f) Use programs and files in a computer network
Section Header	YOUR THOUGHTS ABOUT USING DIGITAL DEVICES	Section Header	YOUR THOUGHTS ABOUT USING ICT
SQ25	**How well can you do each of these tasks on a digital device?** f) Build or edit a website g) Change the settings on your device	SQ30	*Note: Changed wording of stem and answer dimension; also added answer dimension*

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	to improve the way it operates or to fix problems i) Create a computer program or macro (e.g. in [Basic, Visual Basic]) j) Set up a local computer network n) Add content to a webpage		**How well can you do each of these tasks when using ICT?** f) Build or edit a webpage g) Change the settings on your device to improve the way it operates i) Create a computer program, macro, or [app] (e.g. in [Basic, Visual Basic]) j) Set up a local area network of computers or other ICT n) Install a program or [app] p) Select information from within a digital source to use in an assignment q) Create the best layout for a digital product to help viewers understand information
SQ26	**Thinking about [information and computer technology]: How much do you agree or disagree with the following statements?** a) I would like to study subjects related to [information and computer technology] after [secondary school] b) I hope to find a job that involves advanced [information and computer technology] c) Learning how to use computer applications will help to improve my career [prospects, chances] d) Knowing as much as possible about [information and computer technology] will help me get a job e) It is no longer possible to find work without knowing how to use [information and computer technology]	SQ31	*Note: Changed wording of item and answer dimension* **How much do you agree or disagree with the following statements about ICT?** a) I would like to study subjects related to ICT after [secondary school] b) I hope to find a job that involves advanced ICT c) Learning how to use ICT applications will help me to do the work I am interested in d) Knowing as much as possible about ICT will help me get a job e) It is no longer possible to find work without knowing how to use ICT
SQ27	**How much do you agree or disagree with the following statements about [information and computer technology]?** a) Advances in [information and computer technology] usually improve people's living conditions. b) [Information and computer technology] helps us to better understand the world. c) Using [information and computer technology] makes people more isolated in society.	SQ32	*Note: Changed wording in stem and changed answer dimension* **How much do you agree or disagree with the following statements about the use of ICT in society?** a) Advances in ICT usually improve people's living conditions. b) ICT helps us to understand the world better. c) Using ICT makes people more isolated in society. d) Using ICT helps people to relate better to others. e) With more ICT there will be fewer jobs.

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	d) Using [Information and computer technology] helps me to better relate to other people. e) With more [information and computer technology] there will be fewer jobs. f) People waste far too much time using [Information and computer technology] g) [Information and computer technology] is valuable to society. h) Advances in [information and computer technology] bring many social benefits. i) Using [information and computer technology] may be dangerous for people's health.		f) People spend far too much time using ICT. g) ICT is valuable to society. h) Advances in ICT bring many social benefits. i) Using ICT may be dangerous for people's health.
SQ28	**When studying this school year: How often did you use the following tools during class?** a) Tutorial software or [practice programs] b) Digital learning games c) Word-processors or presentation software (e.g. [Microsoft Word ®], [Microsoft PowerPoint ®]) d) Spreadsheets (e.g. [Microsoft Excel®]) e) Multimedia production tools (e.g. media capture and editing, web production) f) Concept mapping software (e.g. [Inspiration ®], [Webspiration ®]) g) Data logging and monitoring tools h) Simulations and modelling software i) Social media (e.g. Facebook, Twitter, Instagram) j) Communication software (e.g. email, instant messaging) k) Computer-based information resources (e.g. websites, wikis, encyclopaedia) l) Interactive digital learning resources (e.g. learning objects) m) Graphing or drawing software	SQ26	*Note: Changed wording in stem changed answer dimensions, and removed answer dimension* **When studying throughout this school year, how often did you use the following tools during class?** a) Tutorial software or [practice programs] b) Word-processing software (e.g. [Microsoft Word ®]) c) Presentation software (e.g. [Microsoft PowerPoint ®]) d) Spreadsheets (e.g. [Microsoft Excel®]) e) Multimedia production tools (e.g. media capture and editing, web production) f) Concept mapping software (e.g. [Inspiration ®], [Webspiration ®]) g) Tools that capture real-world data (e.g. speed, temperature) digitally for analysis h) Simulations and modelling software

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	n) e-portfolios		i) Computer-based information resources (e.g. websites, wikis, encyclopaedia)
			j) Interactive digital learning resources (e.g. learning games or applications)
			k) Graphing or drawing software
SQ29	a) Teachers present information using a digital device or the Internet b) Students do tests on a digital device c) Teachers provide students with feedback on what they have learn d d) Students work on projects using computers and/or the Internet to share resources and ideas e) Students use the Internet for research f) Students use the Internet to contact external experts	SQ27	*Note: Answer dimensions have changed and been added/deleted* a) We use ICT to present information b) My teacher uses ICT to present information c) We do tests on ICT d) My teacher uses ICT to provide students with feedback on what they have learned e) We work on projects using ICT to share resources and ideas f) We use the Internet for research g) We use the Internet to contact external experts
SQ30	**Do you study [computing, computer science, information technology, informatics or similar] in the current school year?** • Yes Please continue with question 31 • No Please go to the end of the questionnaire	SQ35	*Note: Modified answer dimensions* **Do you study [computing, computer science, information technology, informatics or similar] in the current school year?** • Yes • No
SQ31	**When studying [computing, computer science, information technology, informatics or similar] during the current school year, to what extent have you learned how to do the following tasks?** *(Please mark one choice in each row)* • *To a large extent* • *To a moderate extent*	SQ33	*Note: Modified stem and all answer dimensions.* **When studying during the current school year, to what extent have you learned how to do the following tasks?** *(Please mark one choice in each row)* • *To a large extent* • *To a moderate extent* • *To a small extent*

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	• *To a small extent* • *Not at all* a) Developing algorithms b) Designing information systems c) Writing computer programs (in any language) d) Using simulations to test problems e) Evaluating computer programs f) Developing applications g) Refining computer programs to improve their efficiency h) Debugging computer code i) Designing flow diagrams j) Interpreting flow diagrams k) Understanding digital systems l) Build electronic devices m) Testing solutions to systems problems		• *Not at all* a) Display information in different ways b) Break a complex process into smaller parts c) Understand diagrams that describe or show real-world problems d) Plan tasks by setting out the steps needed to complete them e) Identify the most efficient solution to a problem f) Use tools to make diagrams that help solve problems g) Use simulations to help understand or solve real world problems h) Make flow diagrams to show the different parts of a process i) Record and evaluate data to understand and solve a problem j) Work with instructions to complete or describe tasks k) Use real-world data to review and revise solutions to problems
SQ32	**How well do you think you would do the following tasks?** a) Developing algorithms b) Designing information systems c) Writing computer programs (in any language) d) Using simulations to test problems e) Evaluating computer programs f) Developing applications g) Refining computer programs to improve their efficiency h) Debugging computer code i) Designing flow diagrams j) Interpreting flow diagrams	SQ34	*Note: Changed wording in stem and all answer dimensions* **How well do you think you can do the following tasks?** a) Display information in different ways b) Break a complex process into smaller parts c) Understand diagrams that describe or show real-world problems d) Plan tasks by setting out the steps needed to complete them e) Identify the most efficient solution to a problem f) Use tools to make diagrams that help solve problems g) Use simulations to help understand or solve real-world problems h) Make flow diagrams to show the different parts of a process

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	k) Understanding digital systems l) Build electronic devices m) Testing solutions to systems problems		i) Record and evaluate data to understand and solve a problem j) Work with instructions to complete or describe tasks k) Use real-world data to review and revise solutions to problems