Table C-5
Challenges in using ICT, school year 2003-04

	All schools	Instru	ctional level of scho	ool	Location of	school	All schools	Type of s	chool		Size of school	ol
		Elementary	Secondary	Mixed	Urban	Rural		Public	Private	Small	Medium	Large
Proportion of schools with "extensive" challenges in												
using ICT												
Hardware												
Obtaining sufficient number of computers	39.3	40.5	39.6	32.4	40.6	35.6	39.3	39.9	33.7	38.3	37.7	41.7
Ensuring computers and peripherals are up to date	51.8	53.0	50.6	47.4	51.7	52.1	51.8	52.5	45.7	53.0	49.6	52.9
Software												
Obtaining software which is specific enough or adaptable												
	33.7	34.9	28.0	37.4	32.7	36.5	33.7	33.9	32.4	38.5	32.7	30.5
Obtaining sufficient copies/licences of software for												
instructional purposes	43.4	44.2	40.5	44.1	42.4	46.2	43.4	43.5	41.8	45.6	42.8	42.1
Obtaining software in the language of instruction	12.9	13.9	11.7	9.9	13.6	11.1	12.9	13.4	9.2	13.6	12.6	12.8
Instruction												
Integrating computers in classroom instruction practices												
	32.2	34.5	29.1	25.7	33.2	29.4	32.2	32.8	26.1	28.6	31.3	36.2
Having a sufficient number of teachers supervising												
students using computers	20.9	23.2	16.1	17.1	20.6	21.8	20.9	21.1	19.1	22.8	20.1	20.1
Maintaining sufficient level of ICT in all subjects for												
teachers to provide adequate level of instruction	38.3	40.4	35.9	31.0	38.5	37.6	38.3	38.7	33.8	38.5	37.8	38.4
Internet												
Integrating Internet into instruction of low-achieving												
students	21.1	23.4	17.1	16.1	21.3	20.8	21.1	21.4	19.3	22.8	20.8	20.1
Finding enough time in the school's or teachers' schedule												
for using the Internet	34.3	37.1	28.2	30.4	34.2	34.8	34.3	34.7	31.0	35.2	35.0	32.9
Having sufficient connections for simultaneous access to												
the Internet	24.0	25.7	17.6	26.6	21.7	30.4	24.0	23.7	26.8	30.2	21.0	21.7
Ensuring there is no information overload	23.2	25.4	17.7	21.8	23.5	22.5	23.2	23.4	21.2	24.4	22.3	23.1
Ensuring information obtained is of sufficient quality	26.5	28.4	22.4	24.2	26.4	26.9	26.5	26.5	26.6	29.4	24.7	26
Other												
Finding space to integrate computers into the classroom												
appropriately	25.1	26.6	23.5	19.8	26.1	22.4	25.1	25.2	23.5	22.8	24.7	27.5
Lack of knowledge, skills, interest and/or willingness of												
teachers to use computers	19.5	21.2	16.2	16.6	20.0	18.0	19.5	19.9	17.0	17.8	19.2	21.2
Obtaining adequate technical support/assistance for												
operating, maintaining computers and/or solving technical												
problems	31.8	33.4	28.3	29.8	32.0	31.3	31.8	32.4	27.0	31.4	31.3	32.8
Having enough training opportunities for teachers	40.1	42.8	36.3	32.2	40.7	38.3	40.1	41.5	27.7	37.6	38.9	43.3
Ensuring ICT infrastructure is adequate for												
telecommunications	26.5	28.1	22.8	24.9	25.0	30.9	26.5	26.6	26.2	30.7	24.1	25.4
Ensuring ICT infrastructure has anti-theft and anti-												
vandalism mechanisms	15.5	14.6	18.0	15.4	15.9	14.4	15.5	15.0	20.0	16.3	13.6	16.6
Ensuring source of power is dependable	10.3	11.3	7.7	10.0	9.2	13.5	10.3	10.6	8.8	12.3	9.5	9.5
Existence of a jurisdiction or province-wide regulation or												
licensing agreement that prohibits or prevents use of other												
software	9.7	9.8	9.1	10.5	9.4	10.5	9.7	9.7	9.5	9.5	9.4	10.
Finding enough time to integrate ICT into learning	36.7	39.2	32.7	30.1	36.9	35.9	36.7	37.7	27.0	34.3	37.3	38
Having sufficient funding for technology	66.8	68.0	65.4	62.8	67.8	63.9	66.8	67.2	63.3	65.1	65.8	69.3
Other	57.1	54.2	51.1 *	74.6	53.3	66.1	57.1	56.5	55.0 *	58.8	51.5	60.4

Source: Information and Communications Technologies in Schools Survey, 2003-2004

Footnotes

Symbols and abbreviations:

- ... Not applicable
- Suppressed to meet confidentiality requirements of the Statistics Act
- * Numbers marked with this symbol have a coefficient of variation between 16.6% and 25% and are less reliable than unmarked numbers
- ** Numbers marked with this symbol have a coefficient of variation greater than 25% and less or equal to 33.3% and are very unreliable
- F Too unreliable to be published (coefficient of variation surpasses 33.3%)
- 0 Nul. zero or too small to be expressed

Infrastructure:

Notes:

- 1. Processor speeds are measured in Megahertz (MHz), with each MHz representing one million cycles per second (the number of times the computer processor is able to perform a task). Computers with low processor speed include those with processors in the range of 66-233 MHz (e.g. 486, Pentium® I). Computers with medium processor speed typically range in the area of 233 MHz all the way up to 1.4 GHz (Gigahertz) (e.g. Pentium® II/III, AppleTM G3). The most recent generation of processors on the market, classed as having high processor speed, are typically available in speeds of 1.3 GHz to 3.8 GHz and sometimes higher (e.g. Pentium® IV, AppleTM G5).
- 2. Computers with most recent operating systems were computers running with the latest version of operating systems (e.g. WindowsTM NT/2000/XP, MACTM OSX) at the time of the survey.

Source: Information and Communications Technologies in Schools Survey, 2003-2004

Connectedness:

Notes:

- 1. Processor speeds are measured in Megahertz (MHz), with each MHz representing one million cycles per second (the number of times the computer processor is able to perform a task). Computers with low processor speed include those with processors in the range of 66-233 MHz (e.g. 486, Pentium® I). Computers with medium processor speed typically range in the area of 233 MHz all the way up to 1.4 GHz (Gigahertz) (e.g. Pentium® II/III, AppleTM G3). The most recent generation of processors on the market, classed as having high processor speed, are typically available in speeds of 1.3 GHz to 3.8 GHz and sometimes higher (e.g. Pentium® IV, AppleTM G5).
- 2. Dial-up access is defined as "Regular dial-up telephone line with a modem".
- 3. The method to access the Internet is said to be "Always on" when the method used by the school is one of the following: cable modem, high-speed line (ISDN/DSL) or Frame relay, T1 line, optical fibre, fixed wireless (terrestrial) devices or Satellite connection.

Source: Information and Communications Technologies in Schools Survey, 2003-2004

Access:

Notes:

1. Frequency of access is established as follow: Computers that were often to always available outside instructional hours were defined as "frequently accessible". Computers that were rarely available or available sometimes were defined as "infrequently accessible". "Never accessible" was assigned in the cases where principals reported that their computers were never available outside instructional hours.

Source: Information and Communications Technologies in Schools Survey, 2003-2004

Teacher Skills:

Notes:

 Technology applications were defined as frequently incorporated into teaching practices when they were used "most of the time" or "always".

Source: Information and Communications Technologies in Schools Survey, 2003-2004

Challenges:

Source: Information and Communications Technologies in Schools Survey, 2003-2004

Table C-5
Challenges, school year 2003-04
Newfoundland and Labrador

	All schools	Instruction	al Level of Sch	nools	Loca	ition	Τ\	/pe		Size	
	7 60.1.66.16	Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using											
ICT Hardware											
Obtaining sufficient number											
of computers	59.2	62.7	61.5	53.1	68.2	52.2	58.9	х	56	58.3	65.9
Ensuring computers and peripherals are up to date	71.2	74.6	80.7	59.3	80.3	64.1	71.1	x	69.9	66.4	81.9
Software											
Obtaining software which is specific enough or adaptable											
Obtaining sufficient	54.4	54.2	60.9	49.3	61.9	48.6	53.9	X	48.4	53.6	65.6
copies/licences of software for											
instructional purposes	62.6	61	75.2	54.1	70.2	56.6	62.8	х	57.3	65.2	66.2
Obtaining software in the language of instruction	9.1	8.2*	х	12.6*	8.3*	9.6*	9.2	x	12.4*	x	x
Instruction											
Integrating computers in classroom instruction											
practices	31.4	28.8	35.7	31.1	32	31	30.9	x	38.4	22	37.5
Having a sufficient number of											
teachers supervising students using computers	20.4	13.8*	16.8*	30.7	10.7*	27.6	19.6	x	22.7	21.7	x
Maintaining sufficient level of	20.4	15.0	10.0	50.7	-0.7	27.0	17.0			21.7	
ICT in all subjects for teachers to provide adequate level of											
instruction	40.9	40.8	40.8	41.1	39.9	41.6	40.6	х	45.6	38.7	37.1
Internet											
Integrating Internet into instruction of low-achieving											
students	21.3	22.2	19.7	21.4	22	20.7	20.5	х	26.9	13.6*	26.3*
Finding enough time in the school's or teachers' schedule											
for using the Internet											
Having aufficient connections	40.3	40	32.4	47	32	46.8	39.5	Х	42	37.9	41.8
Having sufficient connections for simultaneous access to the											
Internet	24.1	22.0	17.40	21.1	140*	21.0	24.7		21.1	10.6	21.24
Ensuring there is no information	24.1	22.8	17.4*	31.1	14.0*	31.9	24.7	х	31.1	19.6	21.2*
overload	20.3	18.6	17.1*	24.6	14.3*	24.8	18.8	х	29.4	17.6	х
Ensuring information obtained is of sufficient quality											
	24	23.5	21.3	26.8	23.2	24.6	22.2	х	31.9	16.4*	25.8*
Other Finding space to integrate											
computers into the											
classroom appropriately	17.3	16.7	17.4*	18.0*	15.4*	18.8	16.5	х	13.8*	16.9	23.8*
Lack of knowledge, skills, interest and/or willingness of											
teachers to use computers			40.50							***	
Obtaining adequate technical	23.1	26.6	13.7*	26.6	22.4	23.6	23.1	Х	21.3	21.8	28.3
support/assistance for											
operating, maintaining computers and/or solving											
technical problems											
Having enough training	51.8	59	52.2	42.8	60.1	45.3	52.5	Х	46.4	53.8	56.6
opportunities for teachers	56.9	62.8	55.6	51	59.9	54.6	57.1	х	53	54.6	67.6
Ensuring ICT infrastructure is adequate for	I										
telecommunications	33.4	39.7	32.9	26.9	34.9	32.3	33.7	х	37.1	30.1	33.5
Ensuring ICT infrastructure has											
anti-theft and anti-vandalism mechanisms	17.9	16.7	28	11.0*	19.4	16.7	17.7	x	24.4	14.9*	х
Ensuring source of power is											
dependable Existence of a jurisdiction or	4.7*	Х	Х	X	X	5.4**	4.8*	х	Х	Х	Х
province-wide regulation or											
licensing agreement that prohibits or prevents use of											
other software	13.1	9.7*	18.7*	12.4*	10.8*	14.8	13.4	х	16.7	8.3*	16.3*
Finding enough time to integrate ICT into learning	247	36	25.5	40.6	20.0	27.7	242		20 5	24	10 1
Having sufficient funding for	34.7	36	25.5	40.6	30.8	37.7	34.3	X	38.5	24	48.1
technology	79.6		87.3				79.8	х			84.4
Other	x	X	X	X	Х	X	X	Х	Х	X	X

Table C-5
Challenges, school year 2003-04
Prince Edward Island

	All schools	Instruction	al Level of Sch	nools	Loca	tion	Tv	/pe		Size	
	All Schools	Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using		•	,								
ICT											
Hardware											
Obtaining sufficient number of computers	52.9	50.5	61.9	v	48.8	56.9	53.9	x	45.5	52.1	59.2
Ensuring computers and	32.7	30.3	01.9	Λ	70.0	30.7	33.7	Λ	43.3	32.1	37.2
peripherals are up to date	55.7	55.9	53.4	х	50	61.3	56.7	х	42.9	48.1	70.8
Software											
Obtaining software which is specific enough or adaptable											
specific effough of adaptable	33.3	45.5	x	x	33.7	32.8	33.9	х	x	x	49.7
Obtaining sufficient											
copies/licences of software for											
instructional purposes Obtaining software in the	36.4	47	X	Х	40	32.8	36.4	X	37.0*	Х	39.7
language of instruction	11.8*	х	x	х	х	x	11.8*	х	x	x	х
Instruction											
Integrating computers in											
classroom instruction	22	22.0*				22.0*	22				40.4
practices Having a sufficient number of	22	22.0*	X	Х	Х	23.9*	22	Х	Х	X	40.4
teachers supervising students											
using computers	22.8	32.2	х	х	х	27.0*	22.8	х	х	х	х
Maintaining sufficient level of ICT in all subjects for teachers											
to provide adequate level of											
instruction	31	45.4	х	x	31.5	30.4	31	х	х	x	43.9
Internet											
Integrating Internet into											
instruction of low-achieving students	14.1*	Y	x	x	v	x	14.1*	x	x	v	30.3*
Finding enough time in the	14.1	A	A		A	^	14.1				50.5
school's or teachers' schedule											
for using the Internet	27.0	20.2			22.7*	21.0	27.0				26.1
Having sufficient connections	27.8	28.3	X	Х	23.7*	31.9	27.8	X	X	X	36.1
for simultaneous access to the											
Internet											
Encuring there is no information	31.5	38.4	Х	Х	35.1	28.2	31.5	X	38.9*	Х	41.3
Ensuring there is no information overload	x	x	x	x	x	x	x	х	x	x	x
Ensuring information obtained											
is of sufficient quality	4.7.5%	40.4%									
Other	15.7*	19.1*	X	Х	X	Х	15.7*	Х	Х	Х	Х
Finding space to integrate											
computers into the											
classroom appropriately	22.3	26.5	х	х	33.8	х	22.7	х	х	х	48.2
Lack of knowledge, skills, interest and/or willingness of											
teachers to use computers											
	12.6*	22.5*	х	х	х	х	12.6*	х	х	х	х
Obtaining adequate technical											
support/assistance for operating, maintaining											
computers and/or solving											
technical problems											
Having enough training	68.6	72	57.6	X	60	77.5	68.6	X	66.2	63.8	73.9
opportunities for teachers	52.7	59.2	х	х	48.7	56.7	52.7	х	51.1	48.7	57.1
Ensuring ICT infrastructure is											
adequate for	20.2	4= 3			50.5	25.25	20.2			40.0	,
telecommunications Ensuring ICT infrastructure has	38.3	47.2	Х	Х	50.6	25.2*	38.3	Х	X	40.8	45.5
anti-theft and anti-vandalism											
mechanisms	13.7*	x	х	х	х	х	13.7*	х	х	х	х
Ensuring source of power is											
dependable Existence of a jurisdiction or	х	Х	X	X	Х	Х	Х	X	Х	Х	X
province-wide regulation or											
licensing agreement that											
prohibits or prevents use of other software											
Finding enough time to	х	X	X	Х	X	X	X	Х	Х	X	X
integrate ICT into learning	30.8	37.8	x	х	26.2	35.3	30.8	х	х	x	44.6
Having sufficient funding for											
technology Other	74.8	72.4 x	84.7	X X	83.8 x	66 x	74.8 x	x x			89.5
Giller	X	X	х	X	X	X	X	X	X	X	X

Table C-5
Challenges, school year 2003-04
Nova Scotia

	All schools	Instruction	al Level of Sch	nools	Loca	ation	Τ\	/pe		Size	
	7411 00110010	Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using											
ICT Hardware											
Obtaining sufficient number											
of computers	37.4	35.3	43.9	32.3	38.2	36.5	37	х	37.9	41	31.9
Ensuring computers and											
peripherals are up to date Software	51.8	48.4	62	45.2	50.9	52.8	52.1	Х	48.9	54.3	51.3
Obtaining software which is											
specific enough or adaptable											
	42.7	47.4	36.1	34.2	43.6	41.8	42.6	х	45.2	40.1	44
Obtaining sufficient copies/licences of software for											
instructional purposes	51.7	54.3	50.8	40.2	49.1	54.7	52.4	х	52	54.8	47.1
Obtaining software in the											
language of instruction Instruction	10	11.5	6.8*	X	10.1	9.8	10.3	X	11.3	9.3	9.6*
Integrating computers in											
classroom instruction											
practices	31.3	33.8	27.6	26.6	31.2	31.3	31.9	х	27.6	29.8	36.9
Having a sufficient number of teachers supervising students											
using computers	18	19.9	13.9	18.0*	19.5	16.3	18.6	х	15.7	20.7	16.3
Maintaining sufficient level of											
ICT in all subjects for teachers to provide adequate level of											
instruction	37.2	40	33.5	31.6	40	34.3	37.2	x	37.8	35.5	39.1
Internet								-			
Integrating Internet into											
instruction of low-achieving students	16.6	19.6	13.1	v	18.2	14.7	16.8	v	15.9	19.4	13.1
Finding enough time in the	10.0	19.0	13.1	Х	10.2	14.7	10.8	Х	13.9	19.4	13.1
school's or teachers' schedule											
for using the Internet	40.0	42	26.1	40.6	41.5	40.1	41.2	_	42.2	20.2	41.7
Having sufficient connections	40.8	43	36.1	40.6	41.5	40.1	41.3	Х	42.3	39.3	41.7
for simultaneous access to the											
Internet	22.0	25.7	15.0	25.6*	20.5	25.2	22.2		247	20.0	22.0
Ensuring there is no information	22.8	25.7	15.2	25.6*	20.5	25.2	23.3	х	24.7	20.8	23.8
overload	22.2	24.5	16.4	24.6*	23.9	20.2	21.4	х	23.1	21.2	22.7
Ensuring information obtained											
is of sufficient quality	24.7	28.7	16.4	23.7*	30.2	18.7	24.6	x	25.7	25.1	23.3
Other	2	20.7	10	23.7	50.2	10.7	2110		20.7	20.1	20.0
Finding space to integrate											
computers into the classroom appropriately	33.4	36.4	32.8	18.5*	35.3	31.3	33.9		33.4	33.3	33.6
Lack of knowledge, skills,	33.4	30.4	32.0	16.5	33.3	31.3	33.9	х	33.4	33.3	33.0
interest and/or willingness of											
teachers to use computers	17.0	10.0	14.1	_	16.8	18.8	17.4	_	17.2	18.3	17.6
Obtaining adequate technical	17.8	19.9	14.1	Х	10.8	16.6	17.4	х	17.2	18.3	17.6
support/assistance for											
operating, maintaining											
computers and/or solving technical problems											
	16.9	13.9	21.7	21.3*	19.4	14.1	16.5	х	10.6	20.5	18.1
Having enough training			2:-						24-		
opportunities for teachers Ensuring ICT infrastructure is	43.7	45.1	39.7	46.2	45.7	41.5	43.4	Х	36.8	39.6	56.5
adequate for											
telecommunications	18.2	15.8	19.3	28.7*	18.5	17.9	18.2	х	16.7	15.6	23.4
Ensuring ICT infrastructure has anti-theft and anti-vandalism											
mechanisms	15.5	15.7	16.7	x	16.6	14.4	15.7	х	12.9	14.1	20.1
Ensuring source of power is											
dependable Existence of a jurisdiction or	11.5	12.6	7.1*	Х	14.2	8.5	11.5	X	6.2*	11.8	16.1
province-wide regulation or											
licensing agreement that											
prohibits or prevents use of other software	0.2	0.7	6.14		0.1	7.4	0.5			9	10.1*
Finding enough time to	8.3	8.7	6.6*	Х	9.1	7.4	8.5	X	Х	9	10.1*
integrate ICT into learning	39.5	45.2	24.6	46.1	40.3	38.8	39.8	х	41.2	37.6	40.6
Having sufficient funding for	50.5	50	20 T	50.0	co =	50.0	50.0	90.5	(2.2	50.0	500
technology Other	59.6 x	59 x		59.8 x	60.7 x	58.3 x	58.8 x	82.6 x			56.2 x
3	^	Α.	. ^			. ^			. ^	. ^	^

Table C-5
Challenges, school year 2003-04
New Brunswick

	All schools	Instruction	al Level of Sch	nools	Loca	ition	Ty	ре		Size	
		Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using ICT											
Hardware											
Obtaining sufficient number											
of computers Ensuring computers and	41.1	46.6	31.9	х	41.8	40.1	41.8	Х	43.3	36.4	44.2
peripherals are up to date	64.2	68.7	56.5	49.2	64.9	63.1	65.1	х	60.9	68.8	62.9
Software											
Obtaining software which is specific enough or adaptable											
openine enough or unaphable	43.5	44.5	44.6	х	40.6	48.1	43.8	х	43.7	48.2	37.7
Obtaining sufficient copies/licences of software for											
instructional purposes	53.8	58.1	51	x	50.1	59.6	54.3	х	51.5	57.8	51.6
Obtaining software in the	10	10.0	20.6		10.5	17.1	10.4		11.4	27.1	15.1
language of instruction Instruction	18	18.9	20.6	X	18.5	17.1	18.4	х	11.4	27.1	15.1
Integrating computers in											
classroom instruction	26.1	20.2	26.5	41.6	27.0	22.2	25.0	_	21.7	40.9	25.7
Practices Having a sufficient number of	36.1	39.2	26.5	41.6	37.8	33.3	35.9	X	31.7	40.8	35.7
teachers supervising students		= :								. =	
using computers Maintaining sufficient level of	21.9	24.7	15.2	X	19.2	26.1	21.5	Х	29.1	18.6	17.1
ICT in all subjects for teachers											
to provide adequate level of instruction	46.8	53.8	32.8	x	51.6	39.2	47.4	x	46.4	46.7	47.4
Internet	40.0	33.0	32.0	^	31.0	37.2	47.4	Α	70.7	40.7	47.4
Integrating Internet into											
instruction of low-achieving students	26	27.5	23.9	x	28.7	21.7	26.2	х	25.5	29.5	22.3
Finding enough time in the								-			
school's or teachers' schedule for using the Internet											
ior doing the internet	39.7	44	28.7	39.5	42.5	35.4	39.7	х	32.1	45.4	42.7
Having sufficient connections for simultaneous access to the											
Internet											
	28.6	33	17.6	х	24.3	35.2	28.4	х	37.4	22	25.5
Ensuring there is no information overload	19.6	24.2	13.3	х	20.4	18.4	20.1	х	19.1	20.9	18.8
Ensuring information obtained								-			
is of sufficient quality	25.9	29	20	х	24.5	28.3	26.5	х	26.3	23.5	28.2
Other	23.7		20	A	24.5	20.3	20.5	A	20.3	23.3	20.2
Finding space to integrate											
computers into the classroom appropriately	22.4	24.7	17.3	х	21.7	23.4	22.9	х	22.5	24.3	20.1
Lack of knowledge, skills,											
interest and/or willingness of teachers to use computers											
·	22.7	24.9	16.4	х	25.7	18.1	22.8	х	20.2	19.9	29.1
Obtaining adequate technical support/assistance for											
operating, maintaining											
computers and/or solving technical problems											
	25.3	27.4	25	х	26.6	23.1	25.5	х	23.8	28.7	22.9
Having enough training opportunities for teachers	40.1	50.2	40.0		E-A	207	40 5		44.4	47.7	E2 1
Ensuring ICT infrastructure is	48.1	52.3	40.6	Х	54	38.7	48.5	Х	44.4	47.7	53.1
adequate for	***	***								22	
telecommunications Ensuring ICT infrastructure has	28.9	29.3	31.4	Х	26.3	32.9	29.7	х	30.9	32.6	22.2
anti-theft and anti-vandalism			_								
mechanisms Ensuring source of power is	12.4	12.5	15.5	Х	11.3	14	12.7	Х	7.3*	17.4	12.6
dependable	11.8	14.5	8.4*	х	10.4	13.9	12.1	х	12.3	13.4	9.4*
Existence of a jurisdiction or province-wide regulation or											
licensing agreement that											
prohibits or prevents use of other software	10.0	160	0.5*		10 -	12.5	12.2		10 -	140	14.0
Finding enough time to	12.9	16.2	8.5*	Х	12.6	13.5	13.3	Х	10.6	14.3	14.2
integrate ICT into learning	44.7	49.8	32.8	36.4	45.4	43.5	44.8	х	40.1	52.8	40.8
Having sufficient funding for technology	74.7	77.6	69.3	67.1	75.4	73.6	75.3	х	72.6	79.5	71.6
Other	x	x	x		x			X			71.0 X

Table C-5
Challenges, school year 2003-04
Quebec

	All schools	Instruction	al Level of Sch	nools	Loca	ation	Ty	pe		Size	
		Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using ICT											
Hardware											
Obtaining sufficient number											
of computers	51.7	51.9	55.2	35.3	52.3	50.3	53.4	32.8	51.1	50.5	53.3
Ensuring computers and peripherals are up to date	57.4	59.5	50.1	54.9	54.9	63.6	59.4	35.1	62.6	52.3	56.9
Software											
Obtaining software which is											
specific enough or adaptable	41.8	41.7	39.8	50.9	39.5	47.6	43.2	30.4	46.1	39.8	39.7
Obtaining sufficient											
copies/licences of software for instructional purposes	55	56.4	51.8	46.8	54.8	55.4	56.3	42.5	55.1	53.5	56.2
Obtaining software in the		50.1	51.0	10.0	5 110	55	30.5	1210	55.1	55.5	50.2
language of instruction	18.8	19.4	18.1	13.5**	18.9	18.7	19	19.2*	19.1	19.3	18.2
Instruction Integrating computers in											
classroom instruction											
practices	42.8	41.8	46.5	42.8	43.7	40.7	43	42.2	40.7	41.9	45.6
Having a sufficient number of teachers supervising students											
using computers	28.9	31.1	22.9	20.9*	28.1	31.1	30	17.7*	28	29.1	29.7
Maintaining sufficient level of ICT in all subjects for teachers											
to provide adequate level of											
instruction	46.7	45.7	49.4	49.9	44.8	51.4	46.8	45.6	49.1	44.9	45.9
Internet Integrating Internet into											
instruction of low-achieving											
students	25.6	26.5	23.7	19.3*	25.1	26.9	25.9	24.5*	26.9	26	24.2
Finding enough time in the school's or teachers' schedule											
for using the Internet											
Having sufficient connections	29.1	29.4	27.9	30.1*	28.7	30.2	29.3	30.3	29.9	29.8	28
for simultaneous access to the											
Internet											
Ensuring there is no information	30.1	32.4	22.1	30.0*	24.5	44.1	31.1	21.8*	42.3	24.6	23.9
overload	20.8	21.5	17.1	26.1*	19.3	24.7	20.9	20.9*	24.7	17.1	20.4
Ensuring information obtained is of sufficient quality											
is or sumcient quanty	31.8	32.6	29.2	29.9*	30	36.2	32.3	27.2	34.6	28.6	31.9
Other											
Finding space to integrate computers into the											
classroom appropriately	27	25.8	31.8	26.0*	29.5	20.9	26.5	31	22.1	28.2	30.5
Lack of knowledge, skills,											
interest and/or willingness of teachers to use computers											
·	26.2	26.5	24.7	28.4*	27.7	22.5	26.9	20.5*	19.9	26.7	31.4
Obtaining adequate technical support/assistance for											
operating, maintaining											
computers and/or solving technical problems											
technical problems	32.9	33.8	28.9	35.3	32	35	34	22.1*	34.2	31.4	33
Having enough training											
opportunities for teachers Ensuring ICT infrastructure is	37.5	39.1	31.6	37.4	37	38.7	38.6	28	37.6	37.1	37.7
adequate for											
telecommunications Ensuring ICT infrastructure has	33.8	35.2	29	31.6*	28.4	47.2	34.9	24.1	45.1	29.8	27
Ensuring ICT infrastructure has anti-theft and anti-vandalism											
mechanisms	18.9	18	19.8	28.7*	18.2	20.5	19.2	18.4*	20.4	17.8	18.5
Ensuring source of power is dependable	15.9	18.3	9.6*	х	12.6	23.9	16.7	v	22.1	13.1	12.6
Existence of a jurisdiction or	13.7	10.3	2.0	^	12.0	23.7	10.7		22.1	13.1	12.0
province-wide regulation or											
licensing agreement that prohibits or prevents use of											
other software	13.3	13.5	12.4	13.9**	13.2	13.3	13.7	х	12.2	14	13.7
Finding enough time to integrate ICT into learning	41.8	41.6	41.6	45.8	41.8	41.8	42.6	35.7	38.3	45.5	41.9
Having sufficient funding for	41.8	41.0	41.0	43.8	41.8	41.8	42.0	33.7	38.3	43.3	41.9
technology	78.8	79.7	78.3		79.4		80	69.1	77.6		81.8
Other	50.9*	Х	х	X	Х	X	50.9*	X	Х	X	X

Table C-5
Challenges, school year 2003-04
Ontario

	All schools	Instruction	al Level of Sch	nools	Loca	ition	Τ\	ре		Size	
	7 60116616	Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using											
ICT Hardware											
Obtaining sufficient number											
of computers	36.8	36.4	39.3	31	38	31.4	38	29	35.5	35.7	38.5
Ensuring computers and	50.2	40.5	52.6	45	£1.1	16	£0.0	16.4	40.5	40.2	£1.4
peripherals are up to date Software	50.2	49.5	53.6	45	51.1	46	50.8	46.4	49.5	49.3	51.4
Obtaining software which is											
specific enough or adaptable		•		40.4			• • •	20.4			
Obtaining sufficient	27.4	28	22.9	40.6	27.4	27.5	26.9	30.6	32.4	26.6	25.1
copies/licences of software for											
instructional purposes Obtaining software in the	35.3	34.4	37	42.7	35.3	35.2	34.5	40.4	37.8	32.9	35.6
language of instruction	12.2	12.3	12.4	8.4**	12.7	9.8	13	6.9*	15.8	11.4	10.7
Instruction											
Integrating computers in classroom instruction											
practices	30.7	33.6	21.8	21.7*	30.9	29.7	31.8	23.2	27.9	28.8	33.8
Having a sufficient number of											
teachers supervising students using computers	22.2	24.4	16.2	13.3*	22	23.5	22.5	20.8	27.3	21.4	20
Maintaining sufficient level of	22.2	24.4	10.2	13.3	22	23.3	22.3	20.0	21.3	21.4	20
ICT in all subjects for teachers											
to provide adequate level of instruction	38.7	41.2	32.1	26.7	39.2	36.5	39.9	30.3	37.2	41.1	37.7
Internet	200	-1-									
Integrating Internet into											
instruction of low-achieving students	20.3	23.2	12.4	х	20.4	20.2	20.9	15.9	22.7	20	19.3
Finding enough time in the				-				2013			
school's or teachers' schedule for using the Internet											
for using the internet	36.8	41.1	25.3	17.1*	36.7	37.4	37.8	29.8	37.4	38.9	34.9
Having sufficient connections											
for simultaneous access to the Internet											
internet	21.8	23.1	17.4	21.7*	21.3	24.1	21.1	27.2	29	18.7	20.2
Ensuring there is no information overload	25.8	28.1	19.7	15.3*	26.3	23.7	26.2	22.7	26.9	24.7	26.1
Ensuring information obtained	23.6	26.1	19.7	13.3	20.3	23.1	20.2	22.1	20.9	24.7	20.1
is of sufficient quality							•••	***			
Other	26.2	27.3	22.9	22.7*	26.3	25.5	25.8	28.6	30.7	23.5	25.7
Finding space to integrate											
computers into the				4400			•	***			• • •
Lack of knowledge, skills,	27.1	29.1	22	14.0*	26.9	28	28	20.8	25.8	26.1	28.5
interest and/or willingness of											
teachers to use computers	17.9	19.5	12.4	14.6*	18.3	15.9	18.2	15.8	18	17.7	17.9
Obtaining adequate technical	17.9	19.3	12.4	14.0	16.3	13.9	10.2	13.6	16	17.7	17.9
support/assistance for operating, maintaining											
computers and/or solving											
technical problems				_		_					
Having enough training	31.3	32.8	27.8	21.1*	31.1	32.3	32	26.3	31	30.4	32.2
opportunities for teachers	44.7	47.3	40	19.6*	45.3	42	47.4	26.5	39.5	43.5	48.7
Ensuring ICT infrastructure is adequate for											
telecommunications	25.3	26.3	22.8	21.8*	24.8	28.1	25	27.8	26.3	24.5	25.5
Ensuring ICT infrastructure has											
anti-theft and anti-vandalism mechanisms	16.8	15.1	21.6	21.8*	17.2	15	16	22.6	17.9	13.6	18.7
Ensuring source of power is											
dependable Existence of a jurisdiction or	9.3	9.9	7.6	Х	8.5	13.3	9.4	8.7*	11.4	9.2	8.2
province-wide regulation or											
licensing agreement that											
prohibits or prevents use of other software	9.1	9.1	8.6	14.4**	8.9	10.2	8.9	11.2	8.1	۵	9.9
Finding enough time to										ĺ	
integrate ICT into learning	35.2	38.2	27.9	18.1*	35.7	33	36.8	25	31.9	35.9	36.7
Having sufficient funding for technology	63.6	63.3	64.7	62.3	64.4	59.8	64.2	59.5	59.7	63.8	65.7
Other	56.4	54.6*	X	х	58.6		60.7	х	Х		76

Table C-5 Challenges, school year 2003-04 Manitoba

	All schools	Instruction	al Level of Sch	nools	Loca	ation	Τ\	ре		Size	
	7411 00110010	Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using											
ICT Hardware											
Obtaining sufficient number											
of computers	22	19.8	22.5	25.2	22.3	21.6	21.8	х	23.5	17.1	25.5
Ensuring computers and peripherals are up to date	35.6	33.1	29.5	43.7	32.3	40.4	35.6	28.6**	38.2	31.7	36.1
Software	33.0	33.1	29.3	43.7	32.3	40.4	33.0	28.0	36.2	31.7	30.1
Obtaining software which is											
specific enough or adaptable	267	27.6	14.0%	22.6	24.2	20.5	25.2	22.1*	20.0	25.6	21.1
Obtaining sufficient	26.7	27.6	14.3*	33.6	24.2	30.5	25.3	32.1*	30.8	25.6	21.1
copies/licences of software for											
instructional purposes Obtaining software in the	38.7	38.1	30.3	45.4	33.9	45.8	40	30.9**	42.6	38.7	32
language of instruction	11.6	11.5	13.3*	10.8*	13.8	8.4*	12.3	х	7.5*	15.2	14.1*
Instruction											
Integrating computers in											
classroom instruction practices	22	22.3	25.6	19.1	23	20.6	21	х	20.8	24.1	21.3
Having a sufficient number of											
teachers supervising students using computers	11.5	10.3	8.6*	15.2	11.8	11	11.9	x	14.9	6.2*	12.4*
Maintaining sufficient level of	11.3	10.3	8.0*	13.2	11.8	11	11.9	X	14.9	0.2*	12.4
ICT in all subjects for teachers											
to provide adequate level of instruction	24	23.2	27.2	23.2	23.3	25.2	23.9	x	28.3	16.9	26.2
Internet	24	23.2	21.2	2.2.2	23.3	2.0.2	23.9	^	20.3	10.9	20.2
Integrating Internet into											
instruction of low-achieving students	13.9	12	13.5*	18	13.5	14.5	12.8	x	17.8	11.1*	12.6*
Finding enough time in the	13.9	12	13.3	10	13.3	14.3	12.0	Х	17.0	11.1	12.0
school's or teachers' schedule											
for using the Internet	23.3	26.3	15.5	23.7	22.6	24.4	22.6	x	31.7	16.8	19.8
Having sufficient connections	23.3	20.3	13.3	23.1	22.0	24.4	22.0	Α.	31.7	10.0	17.0
for simultaneous access to the											
Internet	17.1	16.3	10.1*	24.9	10.6	27.8	17	х	26.8	8.5*	15.3
Ensuring there is no information	1										
overload Ensuring information obtained	17	17.1	8.8*	23.2	15.9	18.6	16.7	Х	21.8	8.8*	21.1
is of sufficient quality											
	18.8	17.5	12.5*	26.3	16.9	22	18.4	х	24	12.9	19.3
Other Finding space to integrate											
computers into the											
classroom appropriately	17.6	19.8	16.8*	14.6	19.2	15.3	17.2	х	16.6	17.2	19.9
Lack of knowledge, skills, interest and/or willingness of											
teachers to use computers											
Obtaining adamysts to shair al	12.6	13	12.8*	11.7*	12.7	12.4	13.1	X	11.1	11.2	17
Obtaining adequate technical support/assistance for											
operating, maintaining											
computers and/or solving technical problems											
	23	25.9	17.8	21.9	21.5	25.2	23.6	х	25.1	23.9	18.4
Having enough training	25.4	05.0	27.7	22.2	22.0	20	26.5		20.0	22.2	21.6
opportunities for teachers Ensuring ICT infrastructure is	25.4	25.8	27.7	23.2	22.9	29	26.6	х	29.9	22.3	21.6
adequate for											
telecommunications Ensuring ICT infrastructure has	17	15.8	16.0*	19.6	14.1	21.3	17.1	х	18.8	12.5	19.9
anti-theft and anti-vandalism											
mechanisms	10	8.7	11.1*	11.5*	8.3	12.8	9	х	13.6	8.0*	7.4*
Ensuring source of power is dependable	10.2	10	12.7*	8.9*	10	10.4	10.9	x	10	12.6	7.4*
Existence of a jurisdiction or	13.2	10	12.7	0.7	10	10.7	10.7	A		12.0	
province-wide regulation or											
licensing agreement that prohibits or prevents use of											
other software	8.9	6.8*	11.5*	10.7*	6.9	11.9	9	х	10.3	10.4*	,
Finding enough time to integrate ICT into learning	28.4	21.0	22.4	26.6	28.5	28.1	29.2		26.0	30.6	20 1
Having sufficient funding for	28.4	31.9	22.4	26.6	28.5	28.1	29.2	х	26.8	30.6	28.1
technology	49.2	46.5	49.2		47		49.1	39.0*	51.6	44.9	50.7
Other	X	X	X	X	X	X	X	х	х	X	,

Table C-5 Challenges, school year 2003-04 Saskatchewan

	All schools	Instruction	al Level of Sch	ools	Loca	ation	T	/pe		Size	
	All Schools	Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using		-	-								
ICT Hardware											
Obtaining sufficient number											
of computers	23.6	25.6	19.5	23	26.1	20.3	23.5	х	23.2	22	27.8
Ensuring computers and	24.7	27.1	25.0	25.0	22	20.2	24.2		20.7	20.4	26.0
peripherals are up to date Software	34.7	37.1	25.9	35.8	32	38.2	34.2	Х	38.7	30.4	36.2
Obtaining software which is											
specific enough or adaptable											
Obtaining sufficient	31.6	35	20.2	33.1	29.9	33.9	31.8	X	38.6	28.8	24.9
copies/licences of software for											
instructional purposes	40.5	43.5	32.3	40.8	38.3	43.4	40.3	х	39.5	43.4	36.4
Obtaining software in the language of instruction	6.8	10.3	Y	4.0**	9.1	3.8*	6.8	x	6.9*	5.5*	9.4**
Instruction	0.0	10.3	A	4.0	7.1	5.0	0.0	A	0.7	5.5	2.4
Integrating computers in											
classroom instruction practices	21.6	24.7	21.8	17.4	24.5	17.7	21.8		16.8	21.9	29.4
Having a sufficient number of	21.0	24.7	21.8	17.4	24.3	17.7	21.8	х	10.8	21.9	29.4
teachers supervising students											
using computers Maintaining sufficient level of	11.8	11	12.7*	12.4*	11.6	12.2	11.8	х	12.4	11.9	10.5**
ICT in all subjects for teachers											
to provide adequate level of											
Instruction Internet	29.4	32.9	22.9	28	29.4	29.4	29.7	х	30.3	27.3	32.2
Integrating Internet into											
instruction of low-achieving											
students	16.1	20.5	12.9*	11.8*	16.6	15.4	16.4	х	17.1	15.4	15.7*
Finding enough time in the school's or teachers' schedule											
for using the Internet											
	37.1	34	46.4	36.7	34.4	40.9	37.5	Х	39.4	33.8	40.2
Having sufficient connections for simultaneous access to the											
Internet											
Francisco there is no information	15.4	15.7	9.9*	17.7	13.3	18.1	15	Х	15.2	14.9	16.7*
Ensuring there is no information overload	19	20.7	14.1	19.3	18.1	20.4	19.3	х	20.4	21.3	12.0*
Ensuring information obtained											
is of sufficient quality	23.2	24.2	25.6	20.7	22.4	24.4	23	_	25.6	24.2	17.0*
Other	23.2	24.3	23.0	20.7	22.4	24.4	23	X	25.6	24.2	17.0*
Finding space to integrate											
computers into the		40.5			4.4.0				40.	4.50	
classroom appropriately Lack of knowledge, skills,	17.3	18.7	17.1	15.4*	16.9	17.7	17	X	19.5	15.9	16.1*
interest and/or willingness of											
teachers to use computers	17.7	1.0	10	10.0	164	10.5	15.4		22.0	15.0	10.5%
Obtaining adequate technical	17.7	16	19	19.3	16.4	19.5	17.4	Х	22.9	15.2	13.7*
support/assistance for											
operating, maintaining											
computers and/or solving technical problems											
	22	20.3	22.7	23.8	23.1	20.4	21.6	х	24.1	20.5	21.3*
Having enough training	39	43.2	20.4	36.6	20.1	20.0	39.3		42	36.4	37.1
opportunities for teachers Ensuring ICT infrastructure is	39	43.2	32.4	36.6	39.1	38.8	39.3	X	43	36.4	3/.1
adequate for											
telecommunications Ensuring ICT infrastructure has	12.2	12.7	11.0*	12.1*	11.4	13.3	12.6	X	13.4	9.4	16.5*
anti-theft and anti-vandalism											
mechanisms	8.1	7.8*	8.8*	8.1*	8.2	7.9*	8.2	х	9.5*	7.9*	х
Ensuring source of power is dependable	5.6	5.9*	X	5.8*	4.3*	7.5	5.8	x	6.1*	6.1*	x
Existence of a jurisdiction or	5.0	3.9	^	3.0	4.5	1.3	5.6	^	0.1	0.1	^
province-wide regulation or											
licensing agreement that prohibits or prevents use of											
other software	6.6	8.1	x	4.7*	5.9*	7.4	6.8	х	8	6.7*	х
Finding enough time to											
integrate ICT into learning Having sufficient funding for	31.1	25.4	37.7	35.2	27.8	35.6	30.9	X	34.8	30.8	25
technology	43.7	44.6	41.3	43.7	45.5	41.2	43.4	х	43.5	44.8	41.8
Other	х	X	X	X	Х	Х	Х	х	Х	Х	Х

Table C-5 Challenges, school year 2003-04 Alberta

	All schools	Instruction	al Level of Sch	ools	Loca	ation	Ту	pe		Size	
		Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using ICT											
Hardware											
Obtaining sufficient number	27.5	29.4	24.0	20.6	20.0	20.1	26.0	42.0	27.0	27	27.0
of computers Ensuring computers and	37.5	38.4	34.8	38.6	39.8	29.1	36.9	42.9	37.8	37	37.9
peripherals are up to date	53	53.8	49.2	55.1	54.5	47.7	52.1	60.1	53.6	52.4	53.2
Software Obtaining software which is											
specific enough or adaptable											
Obtaining sufficient	34.3	36.7	26.6	37.5	35	31.7	33.9	39	40.9	32.6	30.1
copies/licences of software for											
instructional purposes Obtaining software in the	41.2	43.2	33.6	44.9	41.5	40.2	40.4	48.7	44.7	39.8	39.5
language of instruction	12.9	16.8	10	9.9*	14.8	5.7*	13.2	х	11.9	12.7	14
Instruction Integrating computers in											
classroom instruction											
Practices Having a sufficient number of	24.2	23.6	20.9	27.7	25.3	19.9	23.8	24.4*	18.8	24	29.3
teachers supervising students											
using computers Maintaining sufficient level of	14.5	14.2	11.5	17.6	14.5	14.5	13.8	19.5**	15.3	15.3	13
ICT in all subjects for teachers											
to provide adequate level of instruction	27.4	26.9	26.5	29	27.8	26.1	26.1	38.5	30	27.7	24.7
Internet	27.4	20.7	20.3	2)	27.0	20.1	20.1	36.3	30	21.1	24.7
Integrating Internet into											
instruction of low-achieving students	17.9	22.2	13.3	16	17.9	18	17.9	17.6*	19.9	17	17.4
Finding enough time in the											
school's or teachers' schedule for using the Internet											
Harling and the land and an arthur a	33.9	35.6	30.8	34.2	34.2	32.9	34.2	32.0*	33.2	35.7	32.5
Having sufficient connections for simultaneous access to the											
Internet	25.5	24.5	17.	24.1	22.1	24.5	24.4	2 < 4*	20.2	22.2	24.1
Ensuring there is no information	25.5	24.6	17.6	34.1	23.1	34.5	24.4	36.4*	30.3	23.2	24.1
overload Ensuring information obtained	24.7	27.7	18.1	26.1	25	23.4	25	21.0**	27.9	23.5	23.1
is of sufficient quality											
Othor	26.3	30.4	22	24.1	26.7	25	26.9	20.1*	28.6	25.6	25.2
Other Finding space to integrate											
computers into the	27.1	24.2	27.0	27.7	20.4	22.5	27.0	10.0%	20.7	27.6	22.6
classroom appropriately Lack of knowledge, skills,	27.1	26.3	27.8	27.7	28.4	22.5	27.9	19.8*	20.7	27.6	32.6
interest and/or willingness of											
teachers to use computers	12.3	13	12	11.6	13.7	7.1*	12	15.3**	10.1	12.4	14.2
Obtaining adequate technical											
support/assistance for operating, maintaining											
computers and/or solving technical problems											
Johnnou problems	27	26	20.4	34.2	27.6	24.8	25.7	38.4	26.5	24.8	30
Having enough training opportunities for teachers	29	30.4	26.8	29	31.5	20.1	29.1	29.8*	25.1	29.5	32.2
Ensuring ICT infrastructure is	29	30.4	20.8	29	31.3	20.1	29.1	∠9.8°	23.1	29.3	32.2
adequate for telecommunications	26.8	26.2	22.8	31.2	25.6	31	26.5	29.5*	30.1	24	26.9
Ensuring ICT infrastructure has	20.8	20.2	22.0	31.2	23.0	31	20.3	29.3	30.1	24	20.9
anti-theft and anti-vandalism mechanisms	14.6	13.2	17.1	14.3	15.9	10.0*	14	18.9**	16.9	13.4	13.9
Ensuring source of power is											
dependable Existence of a jurisdiction or	9.3	7.8	5.8*	14.5	8.2	13.3	9.2	11.5**	9.3*	8.4	10.3
province-wide regulation or											
licensing agreement that prohibits or prevents use of											
other software	8.4	7.2	8.2*	10.4	7.8	10.4	8.5	х	9.1*	6.5	10
Finding enough time to integrate ICT into learning	31.7	35	32.2	26.4	33.1	26.6	33	20.0*	30.6	31.9	32.5
Having sufficient funding for											
technology Other	69.5 86		62.4	71.9 x	72.4 79.6	58.9 x	68.9 84.5	78.3 x	67.2 x	70.1	71 x
Julei	I 86	X	X	Х	/9.6	X	84.5	X	X	X	X

Table C-5
Challenges, school year 2003-04
British Columbia

	All schools	Instruction	al Level of Sch	nols	Loca	ntion	Τ\	/pe		Size	
	All Solicois	Elementary	Secondary	Mixed	Urban	Rural	Public	Private	Small	Medium	Large
Extensive Challenges in using		j									
ICT											
Hardware											
Obtaining sufficient number of computers	39.3	43.6	32.4	26.7	40.2	36	39	46.2	37	37.6	44.2
Ensuring computers and	37.5	1310	52	20.7	.0.2	30		.0.2	3,	27.0	2
peripherals are up to date	54.8	58.9	49.6	39.1	53.5	59.6	55.8	50.2	57.4	52	55.6
Software											
Obtaining software which is specific enough or adaptable											
specific effough of adaptable	34.3	39.6	22.8	26.9	34.3	33.9	34.4	33.6	38.1	34.2	30
Obtaining sufficient											
copies/licences of software for	1	50.0	25.7	45.0	45.0	40.0	465	44.5	40.4	47.0	42.2
instructional purposes Obtaining software in the	46.6	50.9	35.7	45.6	45.8	49.8	46.7	44.5	48.4	47.8	43.2
language of instruction	8.7	9.7	6.1*	9.2**	9.1	7.2*	8.6	8.5**	8.3*	8.7	9.2
Instruction											
Integrating computers in											
classroom instruction practices	25.0	27.6	25.1	25	20	20	20.2	22	27.6	20.4	41.7
Having a sufficient number of	35.9	37.6	35.1	25	38	28	38.3	23	27.6	38.4	41.7
teachers supervising students											
using computers	18.3	19.7	16.5	12.9*	18.1	18.8	18.3	19.8	21	17.3	16.5
Maintaining sufficient level of ICT in all subjects for teachers	1										
to provide adequate level of											
instruction	41.2	41.4	44.4	30.5	42.2	37.4	42.8	33.9	38.5	41	44.5
Internet											
Integrating Internet into											
instruction of low-achieving students	23.4	23.6	24.8	17.4*	24.6	18.9	23.5	25.2	23.1	25.2	21.3
Finding enough time in the	23.4	23.0	24.0	17.4	24.0	10.9	23.3	25.2	23.1	25.2	21.3
school's or teachers' schedule											
for using the Internet					25.0						24.5
Having sufficient connections	34.8	39.6	29	16.1*	35.3	33	34.5	36.4	38.1	34.4	31.7
for simultaneous access to the											
Internet											
	24.6	27.7	17.6	22.5*	23.9	27.4	24	27.6	22.6	27.6	22.9
Ensuring there is no information overload	24.2	27.1	19.5	16.3*	24.7	22.5	25.2	15.8*	20	28.7	23
Ensuring information obtained	24.2	27.1	17.3	10.5	24.7	22.3	25.2	15.0	20	20.7	23
is of sufficient quality											
Other	25.2	28.4	18	22.3*	25.4	24.7	25.4	23.9	24.8	27.8	22.4
Other Finding space to integrate											
computers into the											
classroom appropriately	21.1	23.8	16	14.6*	21.6	18.9	19.8	27.3	23.9	20.8	18.4
Lack of knowledge, skills,											
interest and/or willingness of teachers to use computers											
todonoro to doo compatoro	22.9	24.9	19.6	16.8*	23	22.6	24	18.6	19.9	24.5	24.1
Obtaining adequate technical											
support/assistance for	1										
operating, maintaining computers and/or solving	1										
technical problems											
	43.3	46.5	38.1	34	44	40.6	45.8	30	41.4	43.8	44.7
Having enough training opportunities for teachers	40.7	42	40.8	30.9	41.4	38	42.3	31.9	41	38.8	43
Ensuring ICT infrastructure is	40.7	42	40.8	30.9	41.4	38	42.3	31.9	41	38.8	43
adequate for	1										
telecommunications	27.6	30.8	18.1	30.4	26.7	31.3	27.6	28.6	33.7	26.2	23
Ensuring ICT infrastructure has anti-theft and anti-vandalism											
mechanisms	12.8	11.9	13.5	17.4*	13.9	8.6*	11.9	16.5*	12.8	12.4	13.5
Ensuring source of power is											
dependable	8	7.5	7.3*	14.0*	8.3	6.7*	7.8	11.3*	9.4	7.0*	7.8*
Existence of a jurisdiction or province-wide regulation or											
licensing agreement that											
prohibits or prevents use of											
other software	7.8	7.7	6.3*	12.9**	8.3	5.8**	7.3	10.0*	8.6*	7.7	7.1*
Finding enough time to integrate ICT into learning	41.1	44.1	38.7	25.6	41.4	40	42.9	31	37	41.4	45.2
Having sufficient funding for	71.1	44.1	38.7	23.0	+1.4	40	74.7	31	31	41.4	+3.2
technology	70.5	73.5	62.5	70.2	69.6		70.9	66.7	71.4	67.9	72.8
Other	60.4*	X	X	X	X	X	X	X	X	X	X

Table C-5
Challenges, school year 2003-04
Yukon

	A.II	In a toward and	-111-(0-1		1	4	T		0:	
	All	Elementary	al Level of Sch Secondary	Mixed	Loca Urban		Type Public	Small	Size Medium	Large
Extensive Challenges in using		Licinomary	Occornacy	WIXCO	Orban	Italui	1 dbilo	Oman	Mediam	Large
ICT										
Hardware										
Obtaining sufficient number	v			v	v		v	v	v	v
of computers Ensuring computers and	X	X	. x	Х	. X	Х	Х	Х	X	Х
peripherals are up to date	X	x	x	X	. x	х	х	X	X	x
Software										
Obtaining software which is specific enough or adaptable	x	x	x	x	x	x	x	x	x	x
Obtaining sufficient		<u></u>								
copies/licences of software for										
instructional purposes Obtaining software in the	X	X	X	X	. X	Х	Х	X	X	X
language of instruction	Х	x	x	x	x	x	x	X	x	х
Instruction										
Integrating computers in										
classroom instruction										
practices Having a sufficient number of	X	X	X	X	X	Х	Х	X	X	X
teachers supervising students										
using computers	25	X	x	х	x	х	25	х	x	X
Maintaining sufficient level of ICT in all subjects for teachers										
to provide adequate level of										
instruction	34.8	X	x	х	x	х	34.8	X	x	x
Internet										
Integrating Internet into										
instruction of low-achieving students	27.3			v	v		27.3	v	v	v
Finding enough time in the	21.3	λ		Α.		Α	21.3	ΑΑ	Λ	Х
school's or teachers' schedule										
for using the Internet										
Having sufficient connections	41.7	X	X	X	. 50	Х	41.7	X	X	Х
for simultaneous access to the										
Internet										
Ensuring there is no	X	X	X	X	X	X	Х	X	X	Х
information overload	Х	x	x	x	x	x	x	X	x	х
Ensuring information obtained										
is of sufficient quality										
Other	X	X	X	X	. X	X	X	X	X	X
Finding space to integrate computers into the classroom appropriately	v	v	v		v	v	v	v		v
Lack of knowledge, skills,	Α		^	Λ.	Α	Α	Λ	Δ	Λ.	Α.
interest and/or willingness of teachers to use computers	x	x	x	x	. x	x	X	x	x	x
Obtaining adequate technical										
support/assistance for operating, maintaining										
computers and/or solving										
technical problems										
Having or such training	X	X	X	Х	X	Х	Х	X	X	х
Having enough training opportunities for teachers	29.2	X	x	x	x	х	29.2	X	x	y
Ensuring ICT infrastructure is	27.2			^	<u> </u>	^	27.2	Î	,	Α.
adequate for										
telecommunications Ensuring ICT infrastructure has	X	X	X	Х	X	Х	Х	X	X	Х
anti-theft and anti-vandalism										
mechanisms	X	Х	X	х	. x	х	х	Х	х	Х
Ensuring source of power is]					
dependable Existence of a jurisdiction or	X	X	X	X	X	X	Х	X	X	X
province-wide regulation or										
licensing agreement that										
prohibits or prevents use of other software										
Finding enough time to	X	X	X	X	X	Х	Х	X	X	X
integrate ICT into learning	25	X	x	х	x	х	25	х	x	x
Having sufficient funding for							-			
technology Other	33.3 x	X		X		X X	33.3	X		X
Julei	X	X	1 X	. X	X	X	X	ı X	ı X	X

Table C-5
Challenges, school year 2003-04
Northwest Territories

Exemsive Challenges in using CT All Authors					-	_						
Extensive Challenges in using CTC Hardware Cobalning sufficient number 2222		All schools								Small	Size	Lores
CT Hardware Obtaining sufficient number of computers and computers are sure to size the size of the computers and computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers and computers are sure to size of the computers are sure t	Extensive Challenges in using		⊏iementary	Secondary	wixed	urpan	Kurai	Public	Private	Smail	wedium	Large
Dobaming sufficient number 22.2° A 11.2 A 20.0° 22.2° A A 35.3°	ICT											
Telephone	Hardware											
Ensuring computers and propriets and proprie		22.2*	_	_	41.2	_	20.0*	22.2*	_	_	25.2*	
peripherials are up to date	·	22.2**	X	X	41.2	Х	28.0**	22.2"	Х	. х	33.3**	х
Delaning software which is specific enough or adaptable 36.1 N 41.2 N 26 36.1 N N 47.1	peripherals are up to date	41.7	X	х	47.1	х	44	41.7	Х	. х	58.8	х
Specific chough or adaptable 36.1												
Detaining sufficient Solution	_											
Copies/Ricences of software for Instructional purposes	oposino onougii oi uuupuusio	36.1	x	х	41.2	х	36	36.1	х	. x	47.1	х
instructional purposes 41.4 40.0												
Distaining software in the language of instruction		44.4	40.0*	x	47.1	x	48	44.4	x	x	64.7	x
Instruction			10.0		17.11						01.7	
Integrating computers in cleasaroom instruction of procedures supervising students using computers and sufficient number of teachers supervising students using computers and sufficient number of teachers supervising students using computers and supervising students of the provide adequate level of instruction of low-chieving students of the provide adequate level of instruction of low-chieving students and supervising students are supervised as a supervising students of the supervision students of low-chieving students and supervision students are supervised students. The supervision students of low-chieving students are supervised students. The supervision students are supervised students are supervised students. The supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supervised students are supervised students. The supervised students are supe		х	X	X	Х	Х	X	X	X	. х	х	х
Classroom instruction												
Having a sufficient number of teachers users and computers and subjects for teachers users (appendix to provide adequate level of ICT in all subjects for teachers to provide adequate level of instruction and the subjects for teachers to provide adequate level of instruction of low-achieving students and the subject of teachers (appendix to provide adequate level of instruction of low-achieving students and the subject of teachers (appendix to provide adequate level of instruction of low-achieving students and the subject of teachers (appendix to provide adequate for using the Internet line school's or teachers' schedule for using the Internet (appendix to provide adequate for simulations) access to the Internet (appendix to provide adequate for simulation obtained is of sufficient connections (appendix to provide adequate for simulation obtained is of sufficient quality (appendix to provide adequate for the provided adequate for the provided and the provided adequate for the provided adequate for teachers (appendix to provided adequate for teachers) (appendix to provided adequate for												
		41.7	X	х	47.1	х	40	41.7	Х	. х	47.1	х
Section Sect												
Maintaining sufficient level of		20.0*	x	x	37.5*	x	29.2*	20.0*	x	x	x	x
Internet	Maintaining sufficient level of											
Instruction												
Integrating Internet into		40	x	x	52.9	x	41.7	40	x	x	56.3	x
Instruction of low-achieving students	Internet											
Students												
Finding enough time in the school's or teachers' schedule for using the Internet	_	36.1	x	x	52.9	x	44	36.1	х	. x	41.2	x
Maining sufficient connections	Finding enough time in the											
Having sufficient connections for simultaneous access to the Internet												
Having sufficient connections for simultaneous access to the Internet	for using the internet	41.7	х	x	52.9	x	44	41.7	х	. x	41.2	x
Internet												
25.7												
Overload	internet	25.7	х	X	35.3*	х	33.3	25.7	х	. x	x	x
Ensuring information obtained is of sufficient quality 22.2°		II I										
Other Finding space to integrate computers into the classroom appropriately 27.8 x x x x x x x x x x x x x x x x x x x		16.7*	X	X	X	Х	X	16.7*	Х	X	Х	Х
Other Finding space to integrate computers into the classroom appropriately 27.8 x												
Finding space to integrate computers into the classroom appropriately 27.8 x x x x x x x x x x x x x x x x x x x		22.2*	Х	X	X	х	24.0*	22.2*	х	X	х	х
Computers into the classroom appropriately												
Classroom appropriately 27.8												
interest and/or willingness of teachers to use computers 19.4*	classroom appropriately	27.8	X	х	х	х	х	27.8	Х	. х	35.3*	х
19.4° x	• • • • • • • • • • • • • • • • • • • •											
19.4*												
Support/assistance for operating, maintaining computers and/or solving technical problems	Obtabala and a state of the sta	19.4*	Х	X	х	х	Х	19.4*	Х	х	х	Х
operating, maintaining computers and/or solving technical problems 35.3												
Second color of the color of	operating, maintaining											
Having enough training												
Having enough training	technical problems	35.3	x	x	43.8	x	34.8	35.3	x	. x	41.2	x
Ensuring ICT infrastructure is adequate for telecommunications 20.6* x x x x x x 26.1* 20.6* x x x x x x Ensuring ICT infrastructure has anti-theft and anti-vandalism mechanisms 20.6* x x x x x x x x x x x x x x x x x x x			^							<u> </u>		
adequate for telecommunications 20.6* x x x x x x x x x		54.3	42.9*	X	64.7	54.5	54.2	54.3	Х	50	52.9	х
telecommunications 20.6* x x x x x 20.6* x </td <td></td>												
anti-theft and anti-vandalism mechanisms 20.6* x x x x x x 28.0* 20.6* x x x x x x x x x x x x x x x x x x x	telecommunications	20.6*	Х	x	х	х	26.1*	20.6*	Х	х	х	х
The composition of the composi												
Ensuring source of power is dependable		20.6*	х	x	x	x	28.0*	20.6*	x	x	x	х
Existence of a jurisdiction or province-wide regulation or licensing agreement that prohibits or prevents use of other software												
province-wide regulation or licensing agreement that prohibits or prevents use of other software		х	X	X	Х	Х	X	X	Х	X	X	Х
Ilicensing agreement that												
other software x 41.2 Having sufficient funding for technology 57.1 42.9* x 70.6 54.5 58.3 57.1 x x 82.4	licensing agreement that											
Finding enough time to integrate ICT into learning 37.1 x x 35.3* x 33.3 37.1 x x 41.2 Having sufficient funding for technology 57.1 42.9* x 70.6 54.5 58.3 57.1 x x 82.4		v	v	v	v	v	v	v	v	·	v	v
integrate ICT into learning 37.1 x x 35.3* x 33.3 37.1 x x 41.2 Having sufficient funding for technology 57.1 42.9* x 70.6 54.5 58.3 57.1 x x 82.4	Finding enough time to	1	Α	Α	^	^	^	^	^	^	^	^
technology 57.1 42.9* x 70.6 54.5 58.3 57.1 x x 82.4	integrate ICT into learning	37.1	X	X	35.3*	х	33.3	37.1	X	. х	41.2	х
	_	57 1	42.9*	v	70.6	54.5	58.3	57.1	v	v	82.4	v
	Other	x	X	X		x	X	37.1 X	X		X	X

Table C-5
Challenges, school year 2003-04
Nunavut

	AII	Instruction	al Layel of Co	haala	Lass	4ion	Turne		Cina	
	All	Elementary	al Level of Sc Secondary	Mixed	Loca	Rural	Type Public	Small	Size Medium	Large
Extensive Challenges in using		Liementary	Occornacy	MIXCU	Orban	rturur	1 abiio	Oman	Mediam	Luigo
ICT										
Hardware										
Obtaining sufficient number	27.2*	_	_	_			27.2*	_	_	_
of computers Ensuring computers and	27.3*	X	X	X	Х	X	27.3*	X	X	X
peripherals are up to date	57.1	х	х	х	х	53.3	57.1	X	X	x
Software										
Obtaining software which is										
specific enough or adaptable	61.9	X	X	77.8	x	60	61.9	x	x	v
Obtaining sufficient	01.5	A	A	77.0		00	01.5	A	A	
copies/licences of software for										
instructional purposes Obtaining software in the	50	X	X	Х	Х	43.8*	50	X	X	Х
language of instruction	45.5	x	x	66.7	х	50.0*	45.5	х	Х	х
Instruction										
Integrating computers in										
classroom instruction	21.0*						21.0*			
practices Having a sufficient number of	31.8*	X	X	X	Х	X	31.8*	X	X	Х
teachers supervising students										
using computers	28.6*	X	X	x	х	х	28.6*	х	х	Х
Maintaining sufficient level of ICT in all subjects for teachers										
to provide adequate level of										
instruction	63.6	66.7	X	66.7	х	62.5	63.6	X	75	x
Internet										
Integrating Internet into										
instruction of low-achieving students	57.1	v	x	x	v	62.5	57.1	x	v	v
Finding enough time in the	37.1		^	^	Α	02.3	37.1		Α.	^
school's or teachers' schedule										
for using the Internet	20.6*						20.6*			
Having sufficient connections	28.6*	X	X	X	X	X	28.6*	X	X	X
for simultaneous access to the										
Internet										
Ensuring there is no	X	X	X	X	Х	X	X	X	X	Х
information overload	30.0*	х	x	x	x	x	30.0*	х	х	x
Ensuring information obtained										
is of sufficient quality	40.0*						40.0*			
Other	40.9*	X	X	X	Х	X	40.9*	X	X	X
Finding space to integrate										
computers into the										
classroom appropriately	х	X	X	X	Х	X	X	X	X	X
Lack of knowledge, skills, interest and/or willingness of										
teachers to use computers										
	45.5	X	X	х	х	50.0*	45.5	X	X	X
Obtaining adequate technical support/assistance for										
operating, maintaining										
computers and/or solving										
technical problems	63.6	66.7	***	77.8		75	63.6		75	**
Having enough training	05.0	00.7	X	//.8	Х	13	03.0	X	/3	Х
opportunities for teachers	72.7	77.8	X	88.9	х	81.3	72.7	x	75	85.7
Ensuring ICT infrastructure is	T									
adequate for telecommunications	x	X	X	x	x	v	x	v	v	v
Ensuring ICT infrastructure has	A	Α	, A	^	^	Α.	Α		Α.	^
anti-theft and anti-vandalism										
mechanisms Ensuring source of power is	Х	X	X	X	Х	Х	X	X	X	Х
Ensuring source of power is dependable	х	X	X	x	x	x	x	x	х	y
Existence of a jurisdiction or	^	ΑΑ	^	^	^	^	^		^	A
province-wide regulation or										
licensing agreement that prohibits or prevents use of										
other software	X	X	X	x	x	x	x	х	x	х
Finding enough time to		^								
integrate ICT into learning	45.5	X	X	х	х	50.0*	45.5	X	X	х
Having sufficient funding for technology	61.9	v	v	66.7	X	62.5	61.9	v	85.7	w
Other	01.9 X	X	X			02.3 X	01.9 X	X X	83.7 X	X X
										- *