Executive Summary and Appendices:
Development and Validation of the POSITIVES Scale
(Postsecondary Information Technology Initiative Scale)

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Executive Summary

Abstract

Data on how well the information and communication technology (ICT) needs of 1354 Canadian college and university students with disabilities are met on and off campus were collected using the newly developed POSITIVES Scale (Postsecondary Information Technology Initiative Scale). The measure contains 26 items which use a 6-point Likert scale (1 = strongly disagree, 6 = strongly agree) to indicate level of agreement with each of the positively worded items. It has three factor analysis-derived subscales (ICTs at School Meet Student's Needs, ICTs at Home Meet Student's Needs, E-learning ICTs Meet Student's Needs) and a total score. Reliability and validity are excellent for both English and French versions. Versions that could be completed online, on paper (printable PDF), and within a Microsoft Word document were found to be equivalent.

The measure has a variety of attractive features. Only 26 items, it is easy for learners with all types of disabilities to complete, and the simple scoring requires only a straightforward calculation of means. The measure also has the advantage of flexibility due to its "face validity." Thus, the scale (a) permits item-by-item analysis to identify individual areas of perceived strength and weakness, (b) can assess modifiable aspects of ICT availability, usability, and accessibility on campus as well as (c) monitor and evaluate the effects of efforts to improve these. The scale may be used to evaluate how well an institution's ICTs meet students' needs, provide empirical data to influence ICT policy, and pinpoint areas of strength as well as areas for improvement, all from the perspective of students with diverse disabilities.

Findings on POSITIVES Scale subscales indicate that, overall, students' ICT-related needs are better met at school than at home and that their e-learning-related ICT needs are met quite well. Nevertheless, the results also show substantial differences in how the ICT-related needs of students with various disabilities are met in different contexts.

Goals

The objective of this research was to develop the POSITIVES Scale (Postsecondary Information Technology Initiative Scale), a brief, bilingual, reliable, and valid measure to allow staff at postsecondary and rehabilitation institutions a means to assess the extent to which the information and communication technology (ICT)-related needs of students with various disabilities are met. The goal was to ensure that we develop a scale that (a) can be completed by students with all types of disabilities and (b) that would be able to evaluate how well students' general use and adaptive computer and communication technologies-related needs are met both on and off campus. Another requirement was (c) to ensure that the measure can be administered in a variety of alternate formats.

Method

In 2007, a bilingual online questionnaire was developed and completed by 1354 Canadian university and junior/community college students with various disabilities. They were recruited through email-based discussion lists and with the assistance of our project partners. Interested participants were directed to the study's website where they selected their language of choice (English or French), provided informed consent, and completed the online questionnaire.

The questionnaire consisted of (a) demographic questions (e.g., sex, program of study), (b) items where participants could indicate their disability(ies)/impairment(s) (e.g., totally blind, learning disability), (c) as well as any adaptive computer technologies that they use (e.g., software that reads what is on the screen, adapted keyboard), (d) two overall criterion items that inquire about how well students' computer and/or adaptive computer needs are met at school and at home, and (e) the POSITIVES Scale itself.

The POSITIVES Scale has 26 positively worded items that are scored using 6-point Likert scaling (1 = strongly disagree, 6 = strongly agree). It has three factor analysis-derived subscales (ICTs at School Meet Student's Needs, ICTs at Home Meet Student's Needs, E-learning ICTs Meet Student's Needs) and a total score.

Results

Sample Characteristics

Student participants were relatively old (mean age was 28) and about half of the sample reported a learning disability, about a third reported a psychological/psychiatric disability, and over a third reported more than one disability. This implies that different adaptive computer technologies meant to support people with different disabilities need to be able to operate together.

Software/Hardware Used

Half of the students indicated needing specialized software and/or hardware to use a computer effectively. Over 40% indicated using software to improve writing quality, such as grammar and spell checkers followed, in rank order of popularity, by software that reads what is on the screen, scanning and optical character recognition (OCR), dictation software, and software that enlarges what is on the screen.

A minimum of 15% of students in each of the following disability groups indicated using the following computer technologies:
- Learning disability/ADD/ADHD: software that improves writing quality, software that reads what is on the screen, scanning and optical character recognition (OCR), dictation software;
- Totally blind: software that reads what is on the screen, scanning and optical character recognition (OCR), refreshable Braille display, software that improves writing quality;
- Low vision: software that enlarges what is on the screen, software that reads what is on the screen, large screen monitor, software that improves writing quality, scanning and optical character recognition (OCR);
- Deaf: software that improves writing quality, scanning and optical character recognition (OCR);
- Hard of hearing: software that improves writing quality;
- Mobility impairment: software that improves writing quality;
- Limited use of hands or arms: software that improves writing quality, dictation software, alternative mouse, adapted keyboard;
- Medically related/health problem: software that improves writing quality, software that enlarges what is on the screen;
- Psychological/psychiatric disability: software that improves writing quality;
- Neurological impairment: software that improves writing quality, dictation software;
- Pervasive developmental disorder (PDD): software that improves writing quality;
- Multiple disabilities: software that improves writing quality, software that reads what is on the screen, dictation software, software that enlarges what is on the screen, scanning and optical character recognition (OCR), large screen monitor.

POSITIVES Scale Properties

The key deliverable of this project, a valid and reliable measure of how well the ICT-related needs of postsecondary students with disabilities are met, is the 26-item POSITIVES Scale (Postsecondary Information Technology Initiative Scale). It has a total score as well as three factor analysis-derived subscales which evaluate how well ICTs available at school, at home, and in e-learning contexts meet the needs of students with different disabilities in postsecondary education. In addition, alternate formats of the measure (i.e., web-based, Microsoft Word-based, and print-based versions) yielded equivalent results. The full report's Appendix contains the three alternate formats in both French and English, scoring instructions, and norms for the whole sample as well as for English- and French-speaking college and university students separately.

The Appendix also contains preliminary norms for students with specific disabilities. Because of the wording of scale items, we believe that the measure can be used with nondisabled postsecondary students as well, although data for this group were not collected in the context of this investigation.

POSITIVES Scale Subscales. In addition to a total score, the POSITIVES Scale has the following subscales:
- Subscale 1 - ICTs at School Meet Student's Needs. This 12-item subscale evaluates the extent to which students' ICT-related needs are met while they are at school (e.g., My school has enough computers with internet access to meet my needs; The hours of access to computer technologies at my school meet my needs).
- Subscale 2 - ICTs at Home Meet Student's Needs. This 5-item subscale evaluates the extent to which ICT-related needs are met off campus (e.g., Funding for computer technologies for personal use is adequate to meet my needs; My personal computer technologies are sufficiently up-to-date to meet my needs).
- Subscale 3 - E-learning ICTs Meet Student's Needs. This 9-item subscale evaluates the extent to which the school's e-learning meets the student's needs (e.g., My school's web pages are accessible to me; I have no problems when professors use e-learning for tests and exams).

Reliability. Reliability and validity estimates for both English- and French-speaking students with disabilities indicate excellent psychometric properties for the scale. Four-week test-retest reliabilities for the three subscales range from .73 to .79 and the reliability of the total score is .81. Paired t-tests on test and retest scores show no significant differences. Cronbach's alpha, a measure of internal consistency which averages the correlation of items in a survey instrument to assess how well the set of items measures a single construct, ranges from .79 to .91 for the three subscales and it is .94 for the total score. Split-half reliabilities and subscale:total correlations all exceed .70.

Validity. Convergent validity data show moderate correlations among the three subscales and strong relationships between subscale and total scores, suggesting that the subscales measure different concepts, all of which are important components of the accessibility of ICTs. There was no reason to expect that females and males' POSITIVES Scale subscale or total scores would differ. Therefore, to test discriminant validity we compared female and male participants' POSITIVES Scale scores. There were no significant differences between the groups. As expected, score on the overall criterion item "In general, my computer and/or adaptive computer technology needs at my *school* are adequately met" was most closely correlated with Subscale 1 - ICTs at School Meet Student's Needs, and the overall criterion item, "In general, my computer and/or adaptive computer technology needs *at home* are adequately met" was most closely related to Subscale 2 - ICTs at Home Meet Student's Needs. These findings provide concurrent validity information. Based on a priori assumptions, students with psychological/psychiatric disabilities were expected to have their ICT-related needs better met than students with multiple disabilities. To test criterion validity we examined the extent to which the POSITIVES Scale subscales and total scores were able to differentiate between these two groups. The findings show significant differences between the two groups on all subscales as well as on the total score.

How Well Students' ICT-Related Needs are Met

Our results show more favorable than unfavorable scores. Nevertheless, there are some concerns about the availability of adapted computers in school specialized computer laboratories, institutional ICT loan programs, funding for ICTs for personal use, training on ICTs both on and off campus, and technical support when the student is not at school.

The findings also show that students felt the school's web pages are accessible, that they could effectively use the ICTs they needed, that expertise in adaptive ICTs was readily available on campus, that needed electronic format course materials were available, and that the school's interactive online services as well as the library's computer systems were generally quite accessible.

Home versus school. Findings on POSITIVES Scale Subscales indicate that students' e-learning needs and their ICT-related needs at school are better met than their ICT-related needs at home. Comparisons of the views of students with different disabilities about how well their ICT-related needs are met in various contexts at home and at school indicate significant differences.

ICT-related needs of students with different disabilities. Examination of the scores of students with different disabilities/impairments shows that the following needs were better met at home than at school: ICT-related needs of students with low vision, up-to-date features of ICTs of students who are totally blind.

POSITIVES Scale subscales findings suggest that for Subscale 1 (ICTs at School Meet Needs) and Subscale 3 (e-learning ICTs meet students' needs), needs of students who are totally blind, those with multiple disabilities, and those with low vision were met least well, while those of students who are hard of hearing, have a medically related/health problem, have a mobility impairment or a psychological/psychiatric disability were met most effectively.

For Subscale 2 (ICTs at Home Meet Needs), ICT-related needs of the following groups were least well met: multiple disabilities, psychological/psychiatric disability, and learning disability/ADD/ADHD, while needs of students with a mobility impairment, those who are hard of hearing, and those who are totally blind are met best.

Language, institution type and size. The needs of university students who speak French were better met than those of their English-speaking counterparts, while the reverse was true for junior/community college students. Institution size, per se, was not related to how well students felt that their ICT-related needs are met although, in general, students' ICT related needs are better met in colleges than in universities.

Implications and Conclusions

The POSITIVES Scale represents a key step in addressing the evaluation of how well the ICT-related needs of students with disabilities in postsecondary education are met, allowing these students to have a say about the availability, usability, and accessibility of on- and off-campus

ICTs. The measure is brief, simple to score, and can be administered in a variety of formats. The scale (a) permits item-by-item analysis to identify individual areas of perceived strength and weakness, (b) can assess modifiable aspects of the accessibility of ICTs on and off campus, (c) can monitor and evaluate the effects of efforts to improve accessibility, usability, and availability, (d) allows for evaluation of one's own institution's ICTs, and provides a means for (e) continuously measuring progress through internal and external benchmark setting, (f) identifying gaps, (g) targeting specific areas for improvement, and (h) informing policy documents, institutional changes, and ICT budget allocations.

Possible future research directions include: (a) continued validation, (b) additions to the normative data, and (c) collecting new samples, including nondisabled students and samples outside Canada.

To ensure that the ICT-related needs of students with all types of disabilities are well met, using a tool such as the POSITIVES Scale needs to become an institutional priority for colleges, universities, tutoring centers, and rehabilitation facilities. This will result in fewer ICT-related needs being unmet, contribute to the removal of barriers for students, and equip students with disabilities with the skills needed to succeed in the increasingly ICT-driven world of school work, community, and leisure.

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Appendix

POSITIVES Scale (Postsecondary Information Technology Initiative Scale) Items, Factors, and Scoring

Factor	Item number, item wording and scoring	Mean	SD
	Subscale 1 - ICTs at School Meet Student's Needs (Scoring: average all Subscale 1 single item scores other than "not applicable")	4.65	1.03
1	1. My school has enough computers with internet access to meet my needs	4.83	1.46
1	2. The hours of access to computer technologies at my school meet my needs	4.91	1.45
1	3. At my school, computer technologies are sufficiently up to date to meet my needs (e.g., grammar checking, adaptive mouse, software that reads what is on the screen)	4.90	1.43
1	4. There are enough computer technologies in my school's specialized labs/centres for students with disabilities to meet my needs	4.19	1.69
1	5. The availability of computer technologies in my school's general use computer labs meet my needs	4.47	1.62
1	8. The technical support provided at my school for computer technologies meets my needs	4.59	1.46
1	9. When I approach staff at my institution with problems related to the accessibility of computer technologies on campus they act quickly to resolve any issues (e.g., cannot see the PowerPoint presentation, cannot hear a video clip, need a grammar checker to write an essay)	4.72	1.43
1	10. There is at least one person on staff at my school who has expertise in adaptive hardware and software (e.g., knowledgeable about software that reads what is on the screen, keeps up to date with the latest in adapted keyboards)	5.00	1.37
1	11. The availability of technical support when I am not at school meets my needs (e.g., school IT help desk, vendor support)	4.22	1.55
1	13. Training provided by my school on how to use the computer technologies meets my needs	4.29	1.60
1	14. Informal help is available at my school to show me how to use computer technologies if I need this	4.54	1.46
1	24. The physical access to computer technologies at my school meets my needs (e.g., adjustable table, wide enough doorway)	4.90	1.49
	Subscale 2 - ICTs at Home Meet Student's Needs (Scoring: average all Subscale 2 single item scores other than "not applicable")	4.38	1.20
2	6. My school's loan program for computer technologies meets my needs	3.88	1.86
2	7. Funding for computer technologies for personal use is adequate to meet my needs (e.g., government, foundation, rehab center, loan program)	4.07	1.85
2	12. I know how to effectively use the computer technologies that I need	5.08	1.25
2	15. Training available off campus on how to use computer technologies meets my needs	3.64	1.65
2	23. My personal computer technologies are sufficiently up-to-date to meet my needs	4.76	1.52
	Subscale 3 - E-learning ICTs Meet Student's Needs (Scoring: average all Subscale 3 single item scores other than "not applicable")	4.98	0.88
3	16. When professors use eLearning, it is accessible to me (e.g., PowerPoint in the classroom, course notes on the web, CD-ROMs, WebCT)	4.99	1.32
3	17. I have no problems when professors use eLearning for tests and exams (e.g., quizzes in WebCT)	4.71	1.57
3	18. Distance education courses offered by my institution are accessible to me	4.70	1.56
3	19. If I bring computer technology into the classroom I am able to use it (e.g., can plug it in)	4.59	1.50
3	20. I feel comfortable using needed computer technologies in the classroom	4.63	1.54
3	21. My school's interactive online services are accessible to me (e.g., registering, financial aid applications on the web)	5.36	1.06
3	22. The accessibility of the library's computer systems meets my needs (e.g., catalogues, databases, CD-ROMs)	5.02	1.28
3	25. My school's web pages are accessible to me	5.52	0.94
3	26. The availability of electronic format course materials meets my needs (e.g., Word, PDF, MP3)	5.04	1.35
	Total (average) score (Scoring: average all single item scores other than "not applicable")	4.75	0.86

Scoring. For all statements, rate your level of agreement using the following scale: 1 = Strongly Disagree, 2 = Moderately Disagree, 3 = Slightly Disagree, 4 = Slightly Agree, 5 = Moderately Agree, 6 = Strongly Agree, 7 = Not Applicable

POSITIVES Scale Norms for English and French Speaking College and University Students

Language	Institution	Mean	SD
Positives Scale Subscales			
Subscale 1 - ICTs at School Meet Student's Needs			
English	College	4.81	0.98
	University	4.57	1.03
French	College	4.66	1.11
	University	4.79	0.91
Subscale 2 - ICTs at Home Meet Student's Needs			
English	College	4.48	1.16
	University	4.27	1.22
French	College	4.48	1.26
	University	4.86	1.02
Subscale 3 - E-learning ICTs Meet Student's Needs			
English	College	5.08	0.82
	University	4.95	0.84
French	College	5.12	1.15
	University	5.11	0.83
Positives Scale Total (average) score			
English	College	4.87	0.83
	University	4.68	0.87
French	College	4.83	1.03
	University	4.93	0.75

POSITIVES Scale Preliminary Norms for Students with Different Disabilities

Group	Mean	SD
Subscale 1 - ICTs at School Meet Student's Needs		
Totally blind	4.21	1.12
Low vision	4.47	1.13
Deaf	4.60	0.81
Hard of hearing	4.95	0.76
Learning disability / ADD / ADHD (e.g., dyslexia)	4.76	0.98
Mobility impairment (e.g., use of a wheelchair / cane / crutches)	4.81	0.97
Limitation in the use of hands / arms	4.56	0.86
Medically related / health problem (e.g., diabetes, Crohn's)	4.94	0.86
Psychological / psychiatric disability (e.g., anxiety, depression)	4.81	0.89
Neurological impairment (e.g., epilepsy, traumatic brain injury)	4.52	1.08
Multiple disabilities	4.45	1.11
Whole sample	4.65	1.02
Subscale 2 - ICTs at Home Meet Student's Needs		
Totally blind	4.80	0.96
Low vision	4.69	1.11
Deaf	4.86	0.67
Hard of hearing	4.73	0.92
Learning disability / ADD / ADHD (e.g., dyslexia)	4.39	1.20
Mobility impairment (e.g., use of a wheelchair / cane / crutches)	4.70	1.21
Limitation in the use of hands / arms	4.48	1.02
Medically related / health problem (e.g., diabetes, Crohn's)	4.47	1.15
Psychological / psychiatric disability (e.g., anxiety, depression)	4.37	1.21
Neurological impairment (e.g., epilepsy, traumatic brain injury)	4.58	0.93
Multiple disabilities	4.19	1.26
Whole sample	4.38	1.20
Subscale 3 - E-learning ICTs Meet Student's Needs		
Totally blind	4.63	0.69
Low vision	4.90	0.93
Deaf	5.15	0.80
Hard of hearing	5.30	0.54
Learning disability / ADD / ADHD (e.g., dyslexia)	5.01	0.80
Mobility impairment (e.g., use of a wheelchair / cane / crutches)	5.37	0.76
Limitation in the use of hands / arms	5.02	0.69
Medically related / health problem (e.g., diabetes, Crohn's)	5.28	0.86
Psychological / psychiatric disability (e.g., anxiety, depression)	5.13	0.76
Neurological impairment (e.g., epilepsy, traumatic brain injury)	4.91	0.86
Multiple disabilities	4.85	0.92
Whole sample	5.00	0.85
Total (average) score		
Totally blind	4.48	0.73
Low vision	4.67	0.90
Deaf	4.86	0.64
Hard of hearing	5.05	0.63
Learning disability / ADD / ADHD (e.g., dyslexia)	4.81	0.84
Mobility impairment (e.g., use of a wheelchair / cane / crutches)	5.03	0.82
Limitation in the use of hands / arms	4.72	0.73
Medically related / health problem (e.g., diabetes, Crohn's)	5.03	0.78
Psychological / psychiatric disability (e.g., anxiety, depression)	4.87	0.79
Neurological impairment (e.g., epilepsy, traumatic brain injury)	4.69	0.90
Multiple disabilities	4.57	0.92
Whole sample	4.75	0.86

POSITIVES Scale Alternate Formats

POSITIVES Scale (Postsecondary Information Technology Initiative Scale)

Online Version

For all statements, rate your level of agreement using the following scale:

>   Strongly Disagree
>   Moderately Disagree
>   Slightly Disagree
>   Slightly Agree
>   Moderately Agree
>   Strongly Agree
>   Not Applicable

Do not spend too much time on any one statement. Simply give the answer which best describes the general situation. Answer all items. If an item is not applicable to you, respond with not applicable.

1. My school has enough computers with internet access to meet my needs - Select One - ▼
2. The hours of access to computer technologies at my school meet my needs - Select One - ▼
3. At my school, computer technologies are sufficiently up to date to meet my needs (e.g., grammar checking, adaptive mouse, software that reads what is on the screen) - Select One - ▼
4. There are enough computer technologies in my school's specialized labs/centres for students with disabilities to meet my needs - Select One - ▼
5. The availability of computer technologies in my school's general use computer labs meet my needs - Select One - ▼
6. My school's loan program for computer technologies meets my needs - Select One - ▼
7. Funding for computer technologies for personal use is adequate to meet my needs (e.g., government, foundation, rehab center, loan program) - Select One - ▼
8. The technical support provided at my school for computer technologies meets my needs - Select One - ▼

9. When I approach staff at my institution with problems related to the accessibility of computer technologies on campus they act quickly to resolve any issues (e.g., cannot see the PowerPoint presentation, cannot hear a video clip, need a grammar checker to write an essay)

- Select One -

10. There is at least one person on staff at my school who has expertise in adaptive ICTs (e.g., knowledgeable about software that reads what is on the screen, keeps up to date with the latest in adapted keyboards)

- Select One -

11. The availability of technical support when I am not at school meets my needs (e.g., school IT help desk, vendor support)

- Select One -

12. I know how to effectively use the computer technologies that I need

- Select One -

13. Training provided by my school on how to use the computer technologies meets my needs

- Select One -

14. Informal help is available at my school to show me how to use computer technologies if I need this

- Select One -

15. Training available off campus on how to use computer technologies meets my needs

- Select One -

16. When professors use eLearning, it is accessible to me (e.g., PowerPoint in the classroom, course notes on the web, CD-ROMs, WebCT)

- Select One -

17. I have no problems when professors use eLearning for tests and exams (e.g., quizzes in WebCT)

- Select One -

128. Distance education courses offered by my institution are accessible to me

- Select One -

19. If I bring computer technology into the classroom I am able to use it (e.g., can plug it in)

- Select One -

20. I feel comfortable using needed computer technologies in the classroom

- Select One -

21. My school's interactive online services are accessible to me (e.g., registering, financial aid applications on the web)

- Select One -

22. The accessibility of the library's computer systems meets my needs (e.g., catalogues, databases, CD-ROMs) - Select One - ▼
23. My personal computer technologies are sufficiently up-to-date to meet my needs - Select One - ▼
24. The physical access to computer technologies at my school meets my needs (e.g., adjustable table, wide enough doorway) - Select One - ▼
25. My school's web pages are accessible to me - Select One - ▼
26. The availability of electronic format course materials meets my needs (e.g., Word, PDF, MP3) - Select One - ▼

Échelle POSITIVES (Échelle Postsecondary Information Technology Initiative Scale)
Version en ligne

Pour chacun des énoncés suivants, indiquez votre degré d'accord à l'aide de l'échelle suivante :

Fortement en désaccord
Modérément en désaccord
Légèrement en désaccord
Légèrement en accord
Modérément en accord
Fortement en accord
Non Applicable

Indiquez la réponse qui vous vient spontanément et qui décrit le mieux votre situation. Répondez à chaque question. Si un item ne s'applique pas, inscrivez "Non applicable".

1. Mon école a suffisamment d'ordinateurs avec accès à l'Internet pour répondre à mes besoins   *- Choisir un -* ▼
2. Les heures d'accès aux technologies informatiques à mon école répondent à mes besoins   *- Choisir un -* ▼
3. À mon école, les technologies informatiques sont suffisamment à jour pour répondre à mes besoins (ex : correcteur grammatical, souris adaptée, lecteur d'écran).   *- Choisir un -* ▼
4. Mon école a suffisamment de technologies informatiques dans les laboratoires spécialisés / centres de services pour étudiants ayant des incapacités pour répondre à mes besoins   *- Choisir un -* ▼
5. Mon école a suffisamment de technologies informatiques dans les laboratoires informatiques destinés à tous les étudiants pour répondre à mes besoins   Non Applicable ▼
6. À mon école, le programme de prêt de technologies informatiques répond à mes besoins   *- Choisir un -* ▼
7. Les subventions pour les technologies informatiques servant à mon utilisation personnelle répondent à mes besoins (ex : gouvernement, fondation, centre de réadaptation, programme de prêts)   *- Choisir un -* ▼
8. À mon école, le soutien technique fourni pour les technologies informatiques répond

à mes besoins

- Choisir un - ▼

9. Lorsque je rapporte aux membres du personnel de mon école des problèmes reliés à l'accessibilité des technologies informatiques, ils agissent rapidement pour les résoudre (ex : ne peut voir la présentation PowerPoint, ne peut écouter un vidéo clip, besoin d'un correcteur grammatical pour une rédaction)

- Choisir un - ▼

10. À mon école, il y a au moins un membre du personnel qui possède une expertise en matière de technologies informatiques adaptées (ex : possède des connaissances sur les logiciels de lecture d'écran, garde ses connaissances à jour sur les plus récents modèles de claviers adaptés)

- Choisir un - ▼

11. La disponibilité du soutien technique lorsque je ne suis pas à l'école répond à mes besoins (ex : l'assistance technique de l'école / vendeurs)

- Choisir un - ▼

12. Je sais comment utiliser de manière efficace les technologies informatiques dont j'ai besoin

- Choisir un - ▼

13. La formation offerte par mon école sur l'utilisation des technologies informatiques répond à mes besoins

- Choisir un - ▼

14. À mon école, un soutien informel est disponible au besoin pour m'indiquer comment utiliser les technologies informatiques

- Choisir un - ▼

15. La formation sur l'utilisation des technologies informatiques offerte hors du campus répond à mes besoins

- Choisir un - ▼

16. Lorsque les enseignants utilisent le cyber-apprentissage, il m'est accessible (ex : PowerPoint en classe, notes de cours sur Internet, CD-ROMs, WebCT)

- Choisir un - ▼

17. Je n'ai pas de difficultés lorsque les enseignants utilisent le cyber-apprentissage pour les tests et examens (ex : tests sur WebCT)

- Choisir un - ▼

18. Les cours à distance offerts par mon école me sont accessibles

- Choisir un - ▼

19. Je suis en mesure d'utiliser facilement les technologies informatiques que j'amène en classe (ex : je peux les brancher)

- Choisir un - ▼

20. Je me sens à l'aise d'utiliser les technologies informatiques nécessaires en classe

- Choisir un - ▼

21. À mon école, les services en ligne me sont accessibles (ex : inscription, formulaire d'aide financière par Internet) - Choisir un - ▼
22. L'accessibilité du système informatique de la bibliothèque répond à mes besoins (ex : répertoire, bases de données, CD-ROMs) - Choisir un - ▼
23. Mes technologies informatiques personnelles sont suffisamment à jour pour répondre à mes besoins - Choisir un - ▼
24. À mon école, l'accès physique aux technologies informatiques répond à mes besoins (ex : table réglable, porte assez large) - Choisir un - ▼
25. Les sites Web de mon école me sont accessibles - Choisir un - ▼
26. La disponibilité du matériel de cours en format électronique répond à mes besoins (ex : Word, PDF, MP3) - Choisir un - ▼

POSITIVES Scale (Postsecondary Information Technology Initiative Scale) Word Version

For all statements that follow, rate your level of agreement using the following scale.

1 = Strongly Disagree
2 = Moderately Disagree
3 = Slightly Disagree
4 = Slightly Agree
5 = Moderately Agree
6 = Strongly Agree

N/A = Not Applicable

Do not spend too much time on any one statement. Simply give the answer which best describes the general situation. Answer all items. If an item is not applicable to you, respond with not applicable. Put a number beside each item.

1. My school has enough computers with internet access to meet my needs:

2. The hours of access to computer technologies at my school meet my needs:

3. At my school, computer technologies are sufficiently up to date to meet my needs (e.g., grammar checking, adaptive mouse, software that reads what is on the screen):

4. There are enough computer technologies in my school's specialized labs/centres for students with disabilities to meet my needs:

5. The availability of computer technologies in my school's general use computer labs meet my needs:

6. My school's loan program for computer technologies meets my needs:

7. Funding for computer technologies for personal use is adequate to meet my needs (e.g., government, foundation, rehab center, loan program):

8. The technical support provided at my school for computer technologies meets my needs:

9. When I approach staff at my institution with problems related to the accessibility of computer technologies on campus they act quickly to resolve any issues (e.g., cannot see the PowerPoint presentation, cannot hear a video clip, need a grammar checker to write an essay):

10. There is at least one person on staff at my school who has expertise in adaptive ICTs (e.g., knowledgeable about software that reads what is on the screen, keeps up to date with the latest in adapted keyboards):

11. The availability of technical support when I am not at school meets my needs (e.g., school IT help desk, vendor support):

12. I know how to effectively use the computer technologies that I need:

13. Training provided by my school on how to use the computer technologies meets my needs:

14. Informal help is available at my school to show me how to use computer technologies if I need this:

15. Training available off campus on how to use computer technologies meets my needs:

16. When professors use eLearning, it is accessible to me (e.g., PowerPoint in the classroom, course notes on the web, CD-ROMs, WebCT):

17. I have no problems when professors use eLearning for tests and exams (e.g., quizzes in WebCT):

18. Distance education courses offered by my institution are accessible to me:

19. If I bring computer technology into the classroom I am able to use it (e.g., can plug it in):

20. I feel comfortable using needed computer technologies in the classroom:

21. My school's interactive online services are accessible to me (e.g., registering, financial aid applications on the web):

22. The accessibility of the library's computer systems meets my needs (e.g., catalogues, databases, CD-ROMs):

23. My personal computer technologies are sufficiently up-to-date to meet my needs:

24. The physical access to computer technologies at my school meets my needs (e.g., adjustable table, wide enough doorway):

25. My school's web pages are accessible to me:

26. The availability of electronic format course materials meets my needs (e.g., Word, PDF, MP3):

Échelle POSITIVES (Postsecondary Information Technology Initiative Scale)
Version Word

Pour chacun des énoncés suivants, indiquez votre degré d'accord à l'aide de l'échelle suivante.

1 = Fortement en désaccord
2 = Modérément en désaccord
3 = Légèrement en désaccord
4 = Légèrement en accord
5 = Modérément en accord
6 = Fortement en accord

N/A = Non Applicable

Indiquez la réponse qui vous vient spontanément et qui décrit le mieux votre situation. Répondez à chaque question. Si un item ne s'applique pas, inscrivez "Non applicable".

1. Mon école a suffisamment d'ordinateurs avec accès à l'Internet pour répondre à mes besoins:

2. Les heures d'accès aux technologies informatiques à mon école répondent à mes besoins:

3. À mon école, les technologies informatiques sont suffisamment à jour pour répondre à mes besoins (ex : correcteur grammatical, souris adaptée, lecteur d'écran):

4. Mon école a suffisamment de technologies informatiques dans les laboratoires spécialisés / centres de services pour étudiants ayant des incapacités pour répondre à mes besoins À mon école, les technologies informatiques sont suffisamment à jour pour répondre à mes besoins (ex : correcteur grammatical, souris adaptée, lecteur d'écran):

5. Mon école a suffisamment de technologies informatiques dans les laboratoires informatiques destinés à tous les étudiants pour répondre à mes besoins:

6. À mon école, le programme de prêt de technologies informatiques répond à mes besoins:

7. Les subventions pour les technologies informatiques servant à mon utilisation personnelle répondent à mes besoins (ex : gouvernement, fondation, centre de réadaptation, programme de prêts):

8. À mon école, le soutien technique fourni pour les technologies informatiques répond à mes besoins:

9. Lorsque je rapporte aux membres du personnel de mon école des problèmes reliés à l'accessibilité des technologies informatiques, ils agissent rapidement pour les résoudre (ex : ne peut voir la présentation PowerPoint, ne peut écouter un vidéo clip, besoin d'un correcteur grammatical pour une rédaction):

10. À mon école, il y a au moins un membre du personnel qui possède une expertise en matière de technologies informatiques adaptées (ex : possède des connaissances sur les logiciels de lecture d'écran, garde ses connaissances à jour sur les plus récents modèles de claviers adaptés):

11. La disponibilité du soutien technique lorsque je ne suis pas à l'école répond à mes besoins (ex : l'assistance technique de l'école / vendeurs):

12. Je sais comment utiliser de manière efficace les technologies informatiques dont j'ai besoin:

13. La formation offerte par mon école sur l'utilisation des technologies informatiques répond à mes besoins:

14. À mon école, un soutien informel est disponible au besoin pour m'indiquer comment utiliser les technologies informatiques:

15. La formation sur l'utilisation des technologies informatiques offerte hors du campus répond à mes besoins:

16. Lorsque les enseignants utilisent le cyber-apprentissage, il m'est accessible (ex : PowerPoint en classe, notes de cours sur Internet, CD-ROMs, WebCT):

17. Je n'ai pas de difficultés lorsque les enseignants utilisent le cyber-apprentissage pour les tests et examens (ex : tests sur WebCT):

18. Les cours à distance offerts par mon école me sont accessibles:

19. Je suis en mesure d'utiliser facilement les technologies informatiques que j'amène en classe (ex : je peux les brancher):

20. Je me sens à l'aise d'utiliser les technologies informatiques nécessaires en classe:

21. À mon école, les services en ligne me sont accessibles (ex : inscription, formulaire d'aide financière par Internet):

22. L'accessibilité du système informatique de la bibliothèque répond à mes besoins (ex : répertoire, bases de données, CD-ROMs):

23. Mes technologies informatiques personnelles sont suffisamment à jour pour répondre à mes besoins:

24. À mon école, l'accès physique aux technologies informatiques répond à mes besoins (ex : table réglable, porte assez large):

25. Les sites Web de mon école me sont accessibles:

26. La disponibilité du matériel de cours en format électronique répond à mes besoins (ex : Word, PDF, MP3):

POSITIVES Scale (Postsecondary Information Technology Initiative Scale)
PDF Version

For all statements, rate your level of agreement using the following scale:

1	2	3	4	5	6	[N/A]
Strongly Disagree	Moderately Disagree	Slightly Disagree	Slightly Agree	Moderately Agree	Strongly Agree	Not Applicable

Do not spend too much time on any one statement. Simply give the answer which best describes the general situation. Answer all items. If an item is not applicable to you, respond with not applicable.

1. _____ My school has enough computers with internet access to meet my needs

2. _____ The hours of access to computer technologies at my school meet my needs

3. _____ At my school, computer technologies are sufficiently up to date to meet my needs (e.g., grammar checking, adaptive mouse, software that reads what is on the screen)

4. _____ There are enough computer technologies in my school's specialized labs/centres for students with disabilities to meet my needs

5. _____ The availability of computer technologies in my school's general use computer labs meet my needs

6. _____ My school's loan program for computer technologies meets my needs

7. _____ Funding for computer technologies for personal use is adequate to meet my needs (e.g., government, foundation, rehab center, loan program)

8. _____ The technical support provided at my school for computer technologies meets my needs

9. _____ When I approach staff at my institution with problems related to the accessibility of computer technologies on campus they act quickly to resolve any issues (e.g., cannot see the PowerPoint presentation, cannot hear a video clip, need a grammar checker to write an essay)

10. _____ There is at least one person on staff at my school who has expertise in adaptive ICTs (e.g., knowledgeable about software that reads what is on the screen, keeps up to date with the latest in adapted keyboards)

11. _____ The availability of technical support when I am not at school meets my needs (e.g., school IT help desk, vendor support)

12. _____ I know how to effectively use the computer technologies that I need

13. _____ Training provided by my school on how to use the computer technologies meets my needs

14. _____ Informal help is available at my school to show me how to use computer technologies if I need this

15. _____ Training available off campus on how to use computer technologies meets my needs

16. _____ When professors use eLearning, it is accessible to me (e.g., PowerPoint in the classroom, course notes on the web, CD-ROMs, WebCT)

17. _____ I have no problems when professors use eLearning for tests and exams (e.g., quizzes in WebCT)

18. _____ Distance education courses offered by my institution are accessible to me

19. _____ If I bring computer technology into the classroom I am able to use it (e.g., can plug it in)

20. _____ I feel comfortable using needed computer technologies in the classroom

21. _____ My school's interactive online services are accessible to me (e.g., registering, financial aid applications on the web)

22. _____ The accessibility of the library's computer systems meets my needs (e.g., catalogues, databases, CD-ROMs)

23. _____ My personal computer technologies are sufficiently up-to-date to meet my needs

24. _____ The physical access to computer technologies at my school meets my needs (e.g., adjustable table, wide enough doorway)

25. _____ My school's web pages are accessible to me

26. _____ The availability of electronic format course materials meets my needs (e.g., Word, PDF, MP3)

Échelle POSITIVES (Postsecondary Information Technology Initiative Scale) Version PDF

Pour chacun des énoncés suivants, indiquez votre degré d'accord à l'aide de l'échelle suivante:

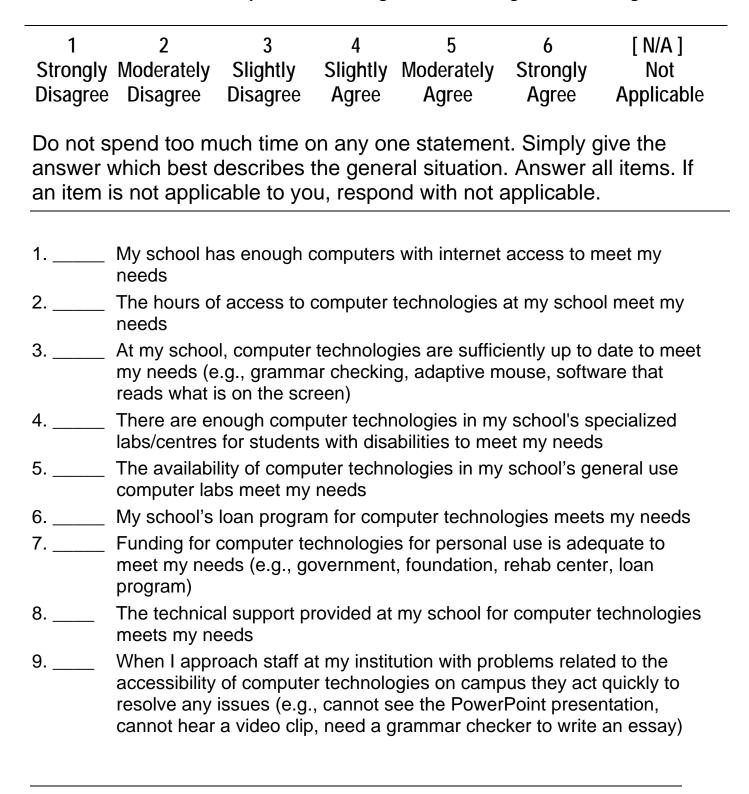| 1	2	3	4	5	6	[N/A]
Fortement en désaccord	Modérément en désaccord	Légère-ment en désaccord	Légère-ment en accord	Modérément en accord	Fortement en accord	Non Applicable

Indiquez la réponse qui vous vient spontanément et qui décrit le mieux votre situation. Répondez à chaque question. Si un item ne s'applique pas, inscrivez "Non applicable".

1. _____ Mon école a suffisamment d'ordinateurs avec accès à l'Internet pour répondre à mes besoins

2. _____ Les heures d'accès aux technologies informatiques à mon école répondent à mes besoins

3. _____ À mon école, les technologies informatiques sont suffisamment à jour pour répondre à mes besoins (ex : correcteur grammatical, souris adaptée, lecteur d'écran)

4. _____ Mon école a suffisamment de technologies informatiques dans les laboratoires spécialisés / centres de services pour étudiants ayant des incapacités pour répondre à mes besoins ~~À mon école, les technologies informatiques sont suffisamment à jour pour répondre à mes besoins (ex : correcteur grammatical, souris adaptée, lecteur d'écran)~~

5. _____ Mon école a suffisamment de technologies informatiques dans les laboratoires informatiques destinés à tous les étudiants pour répondre à mes besoins

6. _____ À mon école, le programme de prêt de technologies informatiques répond à mes besoins

7. _____ Les subventions pour les technologies informatiques servant à mon utilisation personnelle répondent à mes besoins (ex : gouvernement, fondation, centre de réadaptation, programme de prêts)

8. _____ À mon école, le soutien technique fourni pour les technologies informatiques répond à mes besoins

9. _____ Lorsque je rapporte aux membres du personnel de mon école des problèmes reliés à l'accessibilité des technologies

informatiques, ils agissent rapidement pour les résoudre (ex : ne peut voir la présentation PowerPoint, ne peut écouter un vidéo clip, besoin d'un correcteur grammatical pour une rédaction)

10. ____ À mon école, il y a au moins un membre du personnel qui possède une expertise en matière de technologies informatiques adaptées (ex : possède des connaissances sur les logiciels de lecture d'écran, garde ses connaissances à jour sur les plus récents modèles de claviers adaptés)

11. ____ La disponibilité du soutien technique lorsque je ne suis pas à l'école répond à mes besoins (ex : l'assistance technique de l'école / vendeurs)

12. ____ Je sais comment utiliser de manière efficace les technologies informatiques dont j'ai besoin

13. ____ La formation offerte par mon école sur l'utilisation des technologies informatiques répond à mes besoins

14. ____ À mon école, un soutien informel est disponible au besoin pour m'indiquer comment utiliser les technologies informatiques

15. ____ La formation sur l'utilisation des technologies informatiques offerte hors du campus répond à mes besoins

16. ____ Lorsque les enseignants utilisent le cyber-apprentissage, il m'est accessible (ex : PowerPoint en classe, notes de cours sur Internet, CD-ROMs, WebCT)

17. ____ Je n'ai pas de difficultés lorsque les enseignants utilisent le cyber-apprentissage pour les tests et examens (ex : tests sur WebCT)

18. ____ Les cours à distance offerts par mon école me sont accessibles

19. ____ Je suis en mesure d'utiliser facilement les technologies informatiques que j'amène en classe (ex : je peux les brancher)

20. ____ Je me sens à l'aise d'utiliser les technologies informatiques nécessaires en classe

21. ____ À mon école, les services en ligne me sont accessibles (ex : inscription, formulaire d'aide financière par Internet)

22. ____ L'accessibilité du système informatique de la bibliothèque répond à mes besoins (ex : répertoire, bases de données, CD-ROMs)

23. ____ Mes technologies informatiques personnelles sont suffisamment à jour pour répondre à mes besoins

24. ____ À mon école, l'accès physique aux technologies informatiques répond à mes besoins (ex : table réglable, porte assez large)

25. ____   Les sites Web de mon école me sont accessibles

26. ____   La disponibilité du matériel de cours en format électronique répond à mes besoins (ex : Word, PDF, MP3)