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Information and Computer Technologies for Postsecondary Students with Learning Disabilities:
Coding Manual of the LDtech Project ^a

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To investigate the use of information and computer technologies (ICTs) by postsecondary students with learning disabilities (LD) and to generate empirically based best practices recommendations about how both specialized and general use ICTs can effectively be deployed, the responses of 58 interviews conducted with key informants (service providers, students, teachers, community-based individuals, ICT specialists and vendors) were analyzed. Fifteen open-ended questions were asked (see Table 1).

A coding manual was developed to analyze the responses. Categories were created inductively by noting the themes that emerge. The content of each interview was divided into bulleted point form identifying a concept or information for coding. Two bilingual teams of coders (trained to a minimum of 70% inter-rater agreement) independently coded a set of 5 interviews according to the guidelines (see Table 2). Discrepancies were then resolved by consensus codes (in other words, disagreements were resolved by discussion between the two coders). Whenever a reliability check (done for every set of 5 interviews) resulted in a percent agreement that fell below 70%, the coding team 'joint coded' the set of interviews. This served both as a training exercise as well as ensuring the integrity of the codes. Team pairings changed after every set of 5 interviews in order to reduce bias.

The final coding manual is comprised of 59 different ICTs and types of ICTs (see Table 3), 4 advantages of using ICTs (see Table 4), 9 disadvantages of using ICTs (see Table 5), 18 ICT related improvements for students and service providers (see Table 6) and 6 categories of suggestions for designations of 'who is in charge'/'who should be in charge' for tasks related to ICTs and students with learning disabilities (see Table 7). Appendix I and II present examples of a reliability check and data entry for consensus codes.

Inter-rater agreement percentages were calculated as follows: $2 \times \text{Number of Agreements} / (\text{Number of codes recorded by Coder 1} + \text{Number of codes recorded by Coder 2}) \times 100$. Percent agreements were 91% for ICTs, 92% for advantages, 86% for disadvantages, 79% for improvements and 89% for tasks related questions, for a total average of 90%.

Table 1. Interview questions (in English and French)

1	What is the name of your institution and where is it located? <i>Quel est le nom de votre établissement et où est-il situé?</i>
2	a) What is your job title? b) Please describe what your job entails. <i>a) Quel est le titre de votre emploi? b) Veuillez donner une description de votre emploi.</i>
3	What kinds of experiences have you had with ICTs and postsecondary students with learning disabilities? Think about courses taught entirely online, entirely in the classroom and those taught partially online and in the classroom. Think too about ICTs that students can use at school and those they can use at home. <i>Quelles sont vos expériences en lien avec les TIC et les étudiants au niveau postsecondaire ayant des troubles d'apprentissage? Pensez aux cours enseignés entièrement en ligne, entièrement en classe et ceux qui sont enseignés partiellement en ligne et en classe. Pensez aussi aux TIC que les étudiants peuvent utiliser dans l'établissement et à la maison.</i>
4	In your opinion, what types of ICTs and ICT related accommodations are typically needed by students with learning disabilities? <i>Selon votre opinion, quelles sont les TIC et les adaptations reliées aux TIC qui sont utiles pour les étudiants ayant des troubles d'apprentissage?</i>
5	What are the advantages of using ICTs for students with learning disabilities? <i>Quels sont les avantages pour les étudiants ayant des troubles d'apprentissage d'utiliser des TIC?</i>
6	What are the disadvantages of using ICTs for students with learning disabilities? <i>Quels sont les désavantages pour les étudiants ayant des troubles d'apprentissage d'utiliser des TIC?</i>
7	What ICT related improvements could be made for postsecondary students with learning disabilities? <i>Quelles améliorations reliées aux TIC pourraient être effectuées pour les étudiants ayant des troubles d'apprentissage au niveau postsecondaire?</i>
8	What ICT related improvements could be made for campus service providers? <i>Quelles améliorations reliées aux TIC pourraient être effectuées pour les répondants/conseillers pour les étudiants ayant des besoins spéciaux?</i>
9	a) At the post-secondary level who shows students with learning disabilities how to use needed ICTs? b) Who should? <i>a) Au niveau postsecondaire, qui s'occupe de montrer aux étudiants ayant des troubles d'apprentissage comment utiliser les TIC dont ils ont besoin? b) Qui devrait s'en occuper?</i>
10	a) At the post-secondary level, who helps teachers use ICTs (ex. provide support and training to make computer based teaching or learning activities accessible to students with learning disabilities)? b) Who should? <i>a) Au niveau postsecondaire, qui s'occupe de montrer au corps professoral comment utiliser les TIC (ex : fournir du support et la formation pour les aider à rendre leur enseignement ou activités d'apprentissage accessibles aux étudiants ayant des troubles d'apprentissage)? b) Qui devrait s'en occuper?</i>
11	a) At the post-secondary level, who helps troubleshoot accessibility-related problems with ICTs for students with learning disabilities? b) Who should? <i>a) Au niveau postsecondaire, qui s'occupe de régler les problèmes reliés à l'accessibilité des TIC pour les étudiants ayant des troubles d'apprentissage? b) Qui devrait s'en occuper?</i>
12	a) At the post-secondary level, who ensures that ICTs are accessible to students with learning disabilities before selection or purchase? b) Who should? <i>a) Au niveau postsecondaire, qui s'assure que les TIC soient accessibles avant leur adoption ou achat pour les étudiants ayant des troubles d'apprentissage? b) Qui devrait s'en occuper?</i>
13	a) At the post-secondary level, who ensures that the school's ICTs are accessible to students with learning disabilities for assignments and exams? b) Who should? <i>a) Au niveau postsecondaire, qui s'assure que les TIC soient accessibles pour les travaux et examens d'étudiants ayant des troubles d'apprentissage? b) Qui devrait s'en occuper?</i>
14	What should be done to make ICTs more available and accessible for students with learning disabilities? <i>Qu'est-ce qui devrait être fait pour rendre les TIC plus disponibles et accessibles pour les étudiants ayant des troubles d'apprentissage?</i>
15	What else is important or relevant that I have not asked about? <i>Est-ce qu'il y a autre chose d'important ou de pertinent que je n'ai pas mentionné?</i>

Table 2. Guidelines for coding

1	Be as consistent as possible with your coding, even if this means double checking the coding manual before deciding on a code.
2	Code every bulleted unit. When a coder thinks that there is more than one codable item in the bulleted unit, only the first item gets coded. Code everything, even missed bullets (e.g., a piece of text with no bullet beside it should be coded).
3	All data gets coded where it is; however, it may need to be coded as another question (e.g., Subject lists ICTs in Question 7, so use Question 4 codes). It applies especially for Questions 14 and 15.
4	If it's a question about service providers, assume that the answers are about service providers unless specified otherwise. Same thing for questions about students and teachers.
5	For Question 3, only code ICTs/types of ICTs. Use codes from Question 4. The rest should be 100.00 (Wastebasket).
6	For Question 4, code all ICTs not listed in the coding manual as 99.00 (Recycling), but write them down to be added later.
7	For Question 6, use Question 6 codes unless there is a clear key word like 'improvement'. For Questions 7 and 8, use Question 7 codes unless there is a clear key word like 'disadvantage'. When coding Questions 14 and 15, pay attention to Questions 6 versus 7 codes.
8	Questions 9 to 13 have the same codes. Only code the people or services that have been specifically mentioned. The rest should be 100.00 (e.g., "the person needs to be knowledgeable and supportive" = 100.00). Don't forget to differentiate answers for a) 'who does' and b) 'who should'.
9	If someone says "See previous answer", code it as 100.00, except for Questions 9 to 13.
10	If an item seems interesting but is not listed in the coding manual, use 99.00 (Recycling) to be discussed later. Use 100.00 (Wastebasket) when: the answer is irrelevant to the question / there is no answer / you don't understand the item / it doesn't apply to the subject / the subject doesn't know. The codes 99.00 and 100.00 are applicable for all questions.
11	If A codes 99.00 and B codes 100.00 for the same item, it will not be considered an agreement or a disagreement. If both code 99.00 or both code 100.00, it's also not an agreement or disagreement (use 99.00 or 100.00 as final codes). If A codes 99.00/100.00 and B codes 4.04, it's a disagreement and only the 4.04 will count as a code for the denominator of the formula.
12	For each disagreement, both coders decide on a final code to be entered in a final spreadsheet for data analysis.
13	Do a reliability check after every 5 subjects for Questions (5), (6), (3 & 4), (7 & 8), (9 to 13), (14 & 15) separately.
14	Formula for reliability checks: $\text{Inter-rater agreement \%} = \frac{2 \times \text{Number of agreements}}{\text{Number of codes recorded by coder 1} + \text{Number of codes recorded by coder 2}} \times 100$.

Table 3. Question 4: What types of ICTs and ICT related accommodations are typically needed by students with learning disabilities?

Code #	Concepts / Examples
4.01	Antidote
4.02	Audiobooks / <i>Livres audio</i>
4.03	Balabolka
4.04	Cell phones / Handheld / PDA / MP3 players / <i>Téléphones cellulaires / Ordinateur de poche / Assistant numérique personnel / Lecteurs MP3</i> (e.g., iTouch/iPhone)
4.05	ClaroRead
4.06	Cmap
4.07	Computers / Laptops / <i>Ordinateurs / Portables / Preneurs de notes écrites</i>
4.08	Concept mapping tools / <i>Cartes et outils conceptuels (idéateurs)</i>
4.09	Cordial
4.10	C-Pen
4.11	Dictation software / Voice-to-text / Voice recognition / Voice commands / <i>Logiciel de dictée vocale / Reconnaissance de la voix / Commandes vocales</i>
4.12	Digital course materials / eBook / PDF documents / <i>Matériels de cours numériques / Livres électroniques / Documents en format PDF</i>
4.13	Digital recorders / <i>Enregistreurs numériques / Preneurs de notes sonores</i> (e.g., Olympus)
4.14	Dragon Naturally Speaking
4.15	Inspiration
4.16	iZoom
4.17	Kurzweil
4.18	Médialexie
4.19	Microsoft Office (Word, PowerPoint, Outlook)
4.20	OmniPage
4.21	Online courses notes / <i>Notes de cours en ligne</i>
4.22	OpenBook
4.23	Podcasting / <i>Baladodiffusion</i>
4.24	ReadPlease
4.25	Scanners with OCR software / <i>Scanneurs et numériseurs avec ROC</i>
4.26	Screen reading software / Text-to-speech / <i>Logiciels de lecture d'écran / Synthèse vocale</i>
4.27	Smartpen
4.28	Social Medias: Chatrooms / MSN / Facebook / <i>Sites de clavardage</i>
4.29	Spark-Space
4.30	Texthelp
4.31	Vue (Visual Understanding Environment)
4.32	Word highlighting feature / <i>Outil de surlignage du mot</i>
4.33	WordQ
4.34	Writing and correction software (grammar/spell checkers, word prediction, dictionaries, synonyms and antonyms) / <i>Logiciels de rédaction et de correction (correcteurs grammaticaux/orthographiques, prédiction de mots, dictionnaires, synonymes et antonymes)</i>
4.35	Wynn
4.36	Zooming feature (not name of software) / <i>Outil d'agrandissement (pas de nom de logiciel)</i>
4.37	ZoomText
4.38	Cepstral
4.39	Correcteur 101
4.40	Distance education / <i>Cours en ligne</i>
4.41	Daisy
4.42	EndNote
4.43	Franklin Spellchecker

4.44	Hop! Écrire
4.45	Hop! Étude
4.46	I.R.I.S
4.47	Jaws
4.48	Kindle Reader
4.49	MacSpeech Dictate
4.50	Mindmapper
4.51	Moodle
4.52	SpeakQ
4.53	Talking calculator / <i>Calculatrice parlante</i>
4.54	Tap' Touche
4.55	Test-Talker
4.56	TextAloud
4.57	Vocalis
4.58	Windows Vista
4.59	Word processing software (other than Word) / <i>Logiciel de traitement de texte (autre que Word)</i>
99.00	Recycling / <i>Recyclage</i> (Other / Potential answer without a category)
100.00	Wastebasket / <i>Corbeille</i> (Irrelevant / No answer / Don't understand / Doesn't apply to subject / Subject doesn't know)

Table 4. Question 5: Advantages of using ICTs

Code #	Concept	Definition	Examples
5.01	Independence / Autonomy <i>Indépendance / Autonomie</i>	Allows students to be more independent / They don't have to rely on someone else	<i>D'être plus autonomes / More independent / Liberating</i>
5.02	Psychological benefits: ↑ Confidence / ↑ Motivation / ↓ Stress relief ↑ <i>Confiance en soi</i> / ↑ <i>Motivation</i> / ↓ <i>Stress</i>	Helps students' confidence / Helps students be more motivated / Helps alleviate students' stress	Gives them confidence / <i>Supports à la motivation / Ce sont aussi des facteurs de réduction de stress / Estime de soi / Diminue l'anxiété</i>
5.03	Leveling the playing field « <i>Égaliser les chances</i> »	Normalization / Own pace / Helps students be on par with others and overcome their disability / Helps them work at their own pace	Normalizing / Being on same page as others / Helps overcome their disability / <i>Suivre le rythme / Compensent l'incapacité / Going at their pace</i>
5.04	Supports success <i>Soutien à la réussite</i>	Supports success in school, work, life: Quality of work / Organization / Effectiveness / Accuracy / Editing / Better grades / Access to course / Coping with school / Prepares for real life / Helps them do their schoolwork / Shows students' true potential / Helps students' quality of work / Helps students be more effective / Be more organized / Be more accurate in their school-related work / Helps students with grammar/spelling/editing / Helps students cope with school/schoolwork/demands / Helps students' performance and success / Allows students to have access to the course and its materials / Students are more prepared for everyday life/work / Students acquire skills/techniques for learning	Supports their needs in the classroom / The student can better show what he or she has learned / <i>Support à l'apprentissage</i> / Shows their true potential / Being able to do whatever work is needed / Allows and facilitates evaluation / Helps produce good quality work / More accurate / Helps find more precise and accurate info / Helps read better and faster / <i>Permettent d'être plus efficace</i> / Makes teacher - student communication easier / Underlines errors, hear their errors / <i>Permettent de réduire leurs fautes de français / Peuvent reprendre des mots, les effacer ainsi que les déplacer</i> / Offers editing support / Editing suggestions / <i>Meilleure rédaction</i> / Cope with the post-secondary learning demand / <i>Augmentation des notes scolaires / Deviennent plus performants / Avoir une chance de succès dans leurs études</i> / Access to the course content / Are more organized / Keeps them focused / <i>Permettent de développer des stratégies d'apprentissage / Étudiants peuvent généraliser l'habileté et la transférer dans d'autres domaines</i> / Time management / <i>Meilleure mémorisation / Concentration</i>
99.00	Recycling <i>Recyclage</i>	Other / Potential answer without a category	
100.00	Wastebasket <i>Corbeille</i>	Irrelevant / No answer / Don't understand / Doesn't apply to subject / Subject doesn't know	

Table 5. Question 6: Disadvantages of using ICTs

Code #	Concept	Definition	Examples
6.01	Difficulty obtaining services <i>Difficulté d'obtenir des services</i>	Access and availability of services	<i>La demande des services pour obtenir de l'aide est souvent difficile / Access / Difficulté d'obtention / Pas beaucoup de services en français</i>
6.02	Expensive <i>Coûteux</i>	Costs are high	<i>Access to it is expensive / Cost / Mises à jour qui peuvent être payantes</i>
6.03	"Heavy" <i>Encombrement</i>	Inconvenience of transporting material/technologies	<i>Beaucoup de matériel à transporter / Encombrement / Heavy</i>
6.04	Lack training and/or information <i>Manque de formation et/ou d'information</i>	Students and service providers lack training or knowledge on how to use technologies	<i>Software useless if students lack training / Accommodation is not useful if student does not know how to use it / Lacks proper training / Need to learn how to use ICTs / Encore faut-il que celui-ci se débrouille pour apprendre comment les utiliser / Don't even know what technology is available to them</i>
6.05	Negative perceptions <i>Perceptions négatives</i>	Marginalization / Prejudices / Unfair advantage / Cheating / Marks students as being different / Makes their disability more visible / Makes them feel inferior / People perceive LD students will cheat because they get to use technologies	<i>Using ICTs presents them as being different / Cela peut les placent dans une catégorie à part (leur trouble devient apparent) / Can marginalize / Certaines personnes ont des préjugés sur les étudiants ayant des TA / Extra time when they don't really need it; some take unfair advantage / It is important not to believe that a student with a LD will not cheat</i>
6.07	Over-reliance on technology <i>Dépendance aux technologies</i>	Students are too dependent on technologies, they might not know how to function without	<i>Dependent on other people to run the technology / Trop se fier aux outils, qu'ils oublient que l'outil est d'abord un support</i>
6.08	Reluctance to use technology <i>Réticence à utiliser les technologies</i>	Students do not want to use technologies, for whatever reasons	<i>Rébarbatifs à l'utilisation des technologies car ils ne savent pas comment s'y prendre / Some students do not like to use technology / Dislikes technology / Réticence</i>
6.09	Technical problems <i>Problèmes techniques</i>	Not knowing if or which ICTs are appropriate for the student / Negative aspects of specific software and material / Frustration and technologies that do not work well or are not compatible / Technologies might not fit students' needs	<i>En français ce n'est pas toujours au point (voix mécanique et pas d'accent tonique) / Students say that the text to speech software is just not as good as a "live" reader / When the software does not work it leads to frustration / Bugs / Les sites sont mal montés / Technologies pas toujours compatibles avec Mac / Dealing with crashes, making the program work / To make the tech work with recent computers / More upgrades / It is hard to know if a certain type of software will fit a specific student / About different types of LDs: People with different LDs use the technology in different ways and for different reasons / High-tech is great: but it is not the solution to everything / Which tech fits which LD</i>
6.10	Time consuming / Extra effort needed <i>Prend du temps / Efforts supplémentaires</i>	Learning curve / It takes longer to adapt to, learn and use ICTs / It takes extra effort and steps / ICTs can be difficult to learn	<i>Il [faut] accorder du temps de plus [pour] pouvoir bien corriger avec le logiciel de correction / Time consuming / Adaptation time / Time to learn technologies</i>
99.00	Recycling <i>Recyclage</i>	Other / Potential answer without a category	
100.00	Wastebasket <i>Corbeille</i>	Irrelevant / No answer / Don't understand / Doesn't apply to subject / Subject doesn't know	

Table 6. Questions 7 and 8: ICT related improvements for students and service providers

Code #	Concept	Definition	Examples
7.02	Administrative issues <i>Problématiques administratives</i>	Administration / Organization of services / Lengthy processing time / Administrative complexity / Waiting for ICTs funding and requests	<i>Complexité des demandes au ministère / Améliorer l'administration / Améliorations devraient être au niveau administratif</i>
7.03	Assessment of LD <i>Évaluation des troubles d'apprentissage</i>	Adequate assessments	Better identification of students' needs / Less costly assessments / Assessments should include adequate recommendations for technologies
7.04	Availability and access of ICTs <i>Disponibilité et accès aux TIC</i>	More easily available technologies and more access to technologies and labs	More availability of technologies / <i>Les TIC doivent être plus disponibles</i> / Access to the tech / Adequate access to all the types of ICTs devices that are available / More hours and time for labs / More computers for students with LD are required
7.05	Communication and collaboration <i>Communication et collaboration</i>	Communication and collaboration in the school, among schools, between high school and cegep / Support and involvement from others / Resource center about technologies / Better communication and collaboration between departments and people involved / Centralized centre for information/communication between schools / More support and involvement from people other than service providers / Loaning program (<i>service de prêts</i>) for ICTs	Communication between the people involved / <i>Lorsque le ministère développe des outils, il devrait les expérimenter et les raffiner afin que la responsabilité de comprendre et assurer le fonctionnement n'incombe pas aux répondants / Processus de développement efficace / Il devrait y avoir une espèce de communauté des répondants pour échanger trucs, solutions et expertise</i> / Centralized organization that oversees the use of technology for collegial students with LD / <i>Améliorer la communication intercollégiale / Il faudrait un établissement qui soit dépositaire et qui gèrerait la base de données</i> / Also, the parents have to get informed sooner, and have to get involved too / <i>Il pourrait y avoir une association / Réunions d'usagers et d'utilisateurs / Comité d'usagers / Avoir un service de prêts / Meilleure collaboration entre le secondaire et le cégep</i>
7.06	Alternative format course materials <i>Formats adaptés des matériels de cours</i>	Digital texts / More availability and access to adequate course materials	No digital version of text or digital of bought text is at extra cost / <i>Certains enseignants refusent de faciliter la tâche aux étudiants en ne se donnant pas la peine de construire des documents lisibles</i> / Access to digital texts
7.07	Funding: SCHOOL <i>Financement: ÉTABLISSEMENT SCOLAIRE</i>	Need more funds for technologies and staff at school	More investment from the government / <i>Demande de financement pour ajouter des portables au stock de portables</i> / Funding for school
7.08	Funding: STUDENT <i>Financement: ÉTUDIANT</i>	Need more funds for student's personal technologies	Funding home technologies / <i>Oblige les médecins à signer des cases qui ne sont pas nécessairement représentatifs des problèmes de l'étudiant, pour qu'il ait accès à un financement</i>
7.09	Funding: OTHER <i>Financement: AUTRE</i>	Unspecified funding / Funding for other purposes	More funding / Funding is crucial / Funding is lacking / More funding for research
7.10	Prior training of students <i>Formation antérieure des étudiants sur les TIC</i>	Early intervention / Students should be informed/trained earlier about LD and technologies	<i>Interventions préliminaires</i> / The technology needs to be introduced earlier - way before college

7.11	Recognition of LD <i>Reconnaissance des troubles d'apprentissage</i>	LD should be recognized as a real disability	Recognize that LDs are real disabilities
7.12	Reduce costs <i>Réduction des coûts</i>	Costs are too high	To reduce tech's cost / Expensive
7.13	More time, human and physical resources <i>Plus de temps, ressources matérielles et humaines</i>	Resources: More space / More staff / Need more human and physical resources / Need more time for training and tasks / More available rooms for exams and labs / Committee for users of technologies (help/advice)	Resource person to help them deal with problems / IT support for software problems / For labs, for exams, etc / More space / Time for training / Laptops, recorders, etc / More physical resources / Lack of space = lack of assistance / Need more staff/personnel / Service providers need more resources for themselves / <i>Services d'accompagnement / Les répondants pourraient bénéficier de ressources humaines, de conseillers experts / Suivi et encadrement pour les étudiants</i>
7.14	Sensitization and training: DISABILITY SERVICE PROVIDERS <i>Sensibilisation et formation: SERVICES ADAPTÉS</i>	Need to know what technologies are available / Need more information about technologies and LD / More expertise / Sensitization of service providers	To know what is available / <i>Généraliser l'information / Il faudrait implanter un programme formel pour faire prendre connaissance des TIC / Sites de comparaison de logiciels de TIC en ligne / Formations pour les répondants / Service providers need more training</i>
7.15	Sensitization and training: NON-DISABILITIES CAMPUS SERVICES <i>Sensibilisation et formation: SERVICES COLLÉGIAUX</i>	Need more information about technologies and LD / More expertise / Sensitization of staff	To know what is available / <i>Généraliser l'information / Il faudrait implanter un programme formel pour faire prendre connaissance des TIC / Sites de comparaison de logiciels de TIC en ligne / Tenir un séminaire ou un colloque de sensibilisation « obligatoire » des cadres et professeurs des milieux postsecondaires</i>
7.16	Sensitization and training: STUDENTS <i>Sensibilisation et formation: ÉTUDIANTS</i>	Need to know what technologies are available / Need more information about technologies and LD / Sensitization of students / Students need more training and expertise on how to efficiently use technologies	To know what is available / <i>Généraliser l'information / Sites de comparaison de logiciels de TIC en ligne / Il faut également travailler à sensibiliser tant les étudiants / À l'entrée au collégial, une présentation aux étudiants qui ont déjà un diagnostic pour les sensibiliser à l'utilisation des TIC / Séances d'information pour savoir quels outils sont utiles et lesquels ne le sont pas / More information / More training / Improvement in quality of use / Offrir des formations / Présentations vidéo / Formations à domicile / Indiquer où aller chercher de l'aide et faire connaître les ressources</i>
7.17	Sensitization and training: TEACHERS <i>Sensibilisation et formation: PROFESSEURS</i>	Need to know what technologies are available / Need more information about technologies and LD / More expertise / Sensitization of faculty / Teachers and academic departments need more training	To know what is available / <i>Généraliser l'information / Il faudrait implanter un programme formel pour faire prendre connaissance des TIC / Sites de comparaison de logiciels de TIC en ligne / Sensibiliser les enseignants sur le fait que les TIC permettent de favoriser l'autonomie / Indiquer où aller chercher de l'aide et faire connaître les ressources / Tenir un séminaire ou un colloque de sensibilisation « obligatoire » des cadres et professeurs des milieux postsecondaires</i>
7.18	Sensitization and training: OUTSIDE SCHOOL <i>Sensibilisation et formation: HORS-CAMPUS</i>	Conferences / <i>Colloques / Promotion / Campagnes publicitaires / Plus d'information sur les technologies et les TA / Vendors / Public</i>	Informing the community / <i>Campagnes publicitaires / More conferences on LD / Software companies = more promotion / Sensibiliser et informer les gens au sujet des troubles d'apprentissage</i>

7.19	Universal design of instruction <i>Design universel en apprentissage (pédagogie)</i>	Universal Design equalizes access for ALL	If it is designed through Universal Design for Learning, then it can benefit more than just students with disabilities / <i>La vaste majorité des aides technologiques ont la possibilité d'aider un plus grand nombre de gens qu'uniquement ceux avec des troubles d'apprentissage</i> / Technologies should be available in ALL labs, not just specialized labs / <i>Généralisation de l'accès</i>
99.00	Recycling <i>Recyclage</i>	Other / Potential answer without a category	
100.00	Wastebasket <i>Corbeille</i>	Irrelevant / No answer / Don't understand / Doesn't apply to subject / Subject doesn't know	

Table 7. Question 9 to 13: Staff tasks (who does/who should): Show students how to use ICTs; Help teachers use ICTs; Help troubleshoot accessibility-related problems; Ensure that ICTs are accessible to students with learning disabilities before selection or purchase; Ensure that ITCs are accessible for assignments and exams

Code #	Concept	Definition	Examples
9.01	Disability service providers <i>Services adaptés</i>	Campus service provider / Disability technician / <i>Équipe au niveau des services adaptés / Répondant / Orthopédagogue / Learning specialist / DSS</i>	
9.02	External services <i>Services externes</i>	Services, resources and people from outside of school / <i>Centres de réadaptation / Distributeurs / Vendeurs</i>	<i>Je préconiserais quelqu'un de l'externe.</i>
9.03	Nobody <i>Personne</i>		<i>Il y a très peu de cégeps qui ont une personne spécifique à cette tâche-là / It seems to be a job area that needs to be created</i>
9.04	Non-disabilities related services <i>Services collégiaux</i>	Academic Skills Center / Learning Center / Tutoring Center / <i>Conseiller pédagogique / Conseiller TIC / Center for Teacher Training / IT technician / Centre d'aide en informatique / Audiovisuel / Miscellaneous staff / Répondant TIC / People who are not from academic departments</i>	<i>Technicien informatique / Surveillant / Secrétaire</i>
9.05	Students <i>Étudiants</i>	Former students / Other students / Peer tutoring	
9.06	Teachers <i>Professeurs</i>	Student or teacher's department / Academic departments	<i>Que la surveillance des examens soit effectuée par les départements</i>
99.00	Recycling <i>Recyclage</i>	Other / Potential answer without a category	
100.00	Wastebasket <i>Corbeille</i>	Irrelevant / No answer / Don't understand / Doesn't apply to subject / Subject doesn't know	

