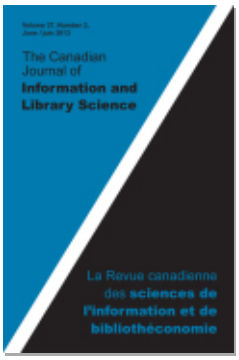
Instruction for Information Literacy in Canadian Academic Libraries: A Longitudinal Analysis of Aims, Methods, and Success / L'enseignement visant les compétences informationnelles dans les bibliothèques universitaires canadiennes : Une analyse longitudinale des objectifs, des méthodes et du succès obtenu



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Instruction for Information Literacy in Canadian Academic Libraries: A Longitudinal Analysis of Aims, Methods, and Success

L'enseignement visant les compétences informationnelles dans les bibliothèques universitaires canadiennes : Une analyse longitudinale des objectifs, des méthodes et du succès obtenu

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Abstract: This study reports a survey of information literacy instruction practices in Canadian academic libraries. Results indicate that formal instruction is offered by 89% of respondents, a minority of which articulate formal instructional objectives or work in libraries with full-time instructional librarians. Evaluation is mostly informal. Teaching students to find information is the highest priority of instruction, and database instruction is given the strongest focus. Changes in information technology continue to influence instructional content and delivery. Instructional work receives less support than previously, and complex relationships with teaching faculty continue to challenge librarian instructors. Trends are consistent with national surveys conducted globally.

Keywords: information literacy, digital literacy, instruction, faculty-librarian relationships, academic libraries, longitudinal research, Canada

Résumé : Cet article fait état d'une enquête sur les pratiques d'enseignement visant l'acquisition de compétences informationnelles dans les bibliothèques universitaires canadiennes. Les résultats indiquent qu'un enseignement formel est offert par 89% des répondants, et qu'une minorité conjugue des objectifs pédagogiques formels ou du travail en bibliothèque avec la présence de bibliothécaires se consacrant à temps plein à cet enseignement. L'évaluation est essentiellement informelle. Enseigner aux

étudiants à trouver de l'information est la première des priorités de l'enseignement, et c'est principalement sur l'enseignement de l'utilisation des bases de données que se concentre l'enseignement. L'évolution des TI continue d'influencer le contenu pédagogique et le mode d'enseignement. Le travail pédagogique reçoit moins de soutien qu'auparavant, et la complexité des relations avec le corps enseignant continue de poser des défis aux bibliothécaires instructeurs. Les tendances sont en accord avec les enquêtes nationales réalisées mondialement.

Mots-clés : compétence informationnelle, compétence numérique, enseignement, relations entre corps enseignant et bibliothécaires, bibliothèques universitaires, recherche longitudinale, Canada

Introduction

Information is useful only to the degree that it is accessible, physically and intellectually. Intellectual access is dependent on the knowledge and skill set of the information seeker; both are amenable to training and have been a long-standing focus in academic libraries, where information seekers have opportunities to develop their information literacy (IL) through training offered by academic librarians. Information literacy instruction (ILI), having emerged in the 1990s from more traditional "bibliographic instruction" or "user education" activities, has become a core service in academic libraries and an increasingly important focus in public and other types of libraries. The definition used in this study is that provided by the Association of College and Research Libraries (2010). We live in a time when many library users and non-users believe that they are "information literate" simply because they make extensive use of the Internet and social media. This confidence is often misplaced. Information overload, misinformation, and complex information retrieval systems, in addition to people's natural inclination to be satisfied with conveniently accessible information, regardless of its accuracy or reliability, combine to challenge most claims of competence in information skills. Librarians have long played a role in training their clients in the skills needed to independently find, retrieve, analyse, and use information effectively and efficiently. In the academic library context, many positions in public service require some involvement in instructional activities, very often in front-line delivery of instruction. Instruction is now truly a core professional activity for academic librarians and thus demands research attention.

This paper presents the latest results (gathered in 2011) of Canada's only longitudinal study of ILI practices in academic libraries. The objective of this research program is to document instructional practices (including organization, delivery, and evaluation) in Canada's university and college libraries, with the goal of increasing understanding of those activities so that opportunities for improvement can be identified. This paper presents the fourth and most recent in a series of national surveys (Julien 2000; Julien 2006; Julien and Leckie 1997) and analyses longitudinal trends observable over the past one and one-half decades. The previous surveys found that instructional practices remain largely

traditional, with the "one-shot" short teaching session aimed at undergraduate students being most prevalent. Instructional topics naturally follow relative attention to resources used in libraries, resulting in significantly increased focus on online resources over time and also prompting significant change in pedagogy and content due to changes in information technology. Planning, publicity, and evaluation efforts have been mostly informal in nature, and support in the form of dedicated budgets has not been the norm. Challenges to instructional success have been remarkably stable over time, including insufficient financial, staff, and technological resources, as well as complicated relationships with teaching faculty on campuses. Student attitudes that devalue the expertise of librarians and that generate overconfidence in IL skills have also been enduring issues.

There are few national surveys of IL instructional practice which seek to explore the scope and operations of these efforts in the academic library context. Exceptions other than the Canadian surveys noted above include recent studies undertaken in Tanzania (Lwehabura and Stilwell 2008), South Africa (Jiyane and Onyancha 2010), the Republic of Ireland (McGuinness 2009), and India (Pattar and Kanamadi 2010). The data from the current survey are compared with these international studies. Other published research focuses more narrowly on specific issues arising in the context of IL instruction, such as faculty-librarian relationships (DaCosta 2010; Hrycaj and Russo 2007; Julien and Pecoskie 2009; McGuinness 2009) and the emotional labour of instructional work (Julien and Genuis 2009). A great deal of literature in the area published by practising librarians describes instructional work in particular, local contexts. Thus, there is an identifiable gap in understanding IL instructional practices generally.

Methods

The 2011 survey was sent electronically to 384 English-language and 126 French-language library staff with instructional responsibilities in all Canadian university and college libraries. Ethical approval for the study was obtained by the University of Alberta. A directory, *Libraries Canada*, was used to identify institutions, and potential survey participants were identified by searching the websites of the libraries listed in the directory. Archives and departmental reading rooms were omitted from the sample. An e-mail invitation to complete the survey was sent to one representative from each library on 5 May 2011, and after two reminder e-mails (a practice recommended by Van Selm and Jankowski 2006) the survey closed on 10 June 2011. Because Canada is a bilingual country, the survey was sent in English to libraries operating largely in English, and in French to francophone libraries. The survey instrument used both closed- and open-question items and asked respondents about their instructional objectives (actual and preferred), their pedagogical approaches, the content of instruction, the marketing techniques used to publicize instructional opportunities, the evaluation and learning assessment that occurs for ILI, the support received for ILI, challenges to ILI, and the relative responsibility that librarians share for developing information literacy skills (see appendixes). The questions

were consistent with those asked in previous surveys in this longitudinal series (Julien 2000; Julien 2006; Julien and Leckie 1997). Data from closed items were analysed quantitatively; qualitative comments were analysed thematically.

Results and discussion

Participants

Presentation of results from the current study includes comparable data gathered during the 2005, 2000, and 1995 surveys. Survey return rates for the 2011 survey were as follows: English-language respondents accounted for 71% (n = 87) of the returned surveys, and the remaining 29% (n = 36) came from French-language respondents. Based on the 384 English-language and 126 French-language surveys sent out, the response rate was 22.7% and 28.6% for English and French respondents, respectively. The overall response rate for the survey was 24.1% (n = 123). This continued the downward trend in response rate from the 2005 survey which had a response rate of 44.3% and previous surveys which had a greater than 50% response rate.

As in 2005 and 2000, university libraries accounted for over half of respondents, at 56.9% (n = 70). Second in response frequency were college or technical institute libraries, at 38.2% (n = 47), followed by other libraries, at 4.9% (n = 6). Libraries at institutions having fewer than 10,000 undergraduate students (small institutions) accounted for 68.9% (n = 84) of respondents; libraries at institutions with 10,000 to 20,000 undergraduate students (medium-sized institutions) accounted for 10.7% (n = 13), and libraries at institutions with an undergraduate population of more than 20,000 students (large institutions) accounted for 20.5% (n = 25). The proportion of respondents from small institutions was higher than in previous years (56.8% in 2005, 60.6% in 2000), while the proportion from medium-sized institutions was the lowest it had been across all survey years (21.9% in 2005, 18.7% in 2000, and 21.4% in 1995); the proportion of large institutions was relatively unchanged across all years. Table 1 summarizes the disciplinary focus of respondent libraries.

Table 1: Disciplinary focus of respondent libraries

Disciplinary focus	Percentage of respondents (n)[a]
Social sciences/humanities	46.1 (35)
Other	32.9 (25)
Health/medicine	21.0 (16)
Sciences	19.7 (15)
Education	18.4 (14)
Business	10.5 (8)
Engineering	5.3 (4)
Law	2.6 (2)

[a] Percentages were based on the number of respondents to this question. Several respondent libraries focused on multiple disciplines or subject areas; hence, the percentages add up to more than 100%.

Instruction: What and who

The majority of respondents (89.3%, *n* = 109) offered formal instructional classes. This was a similar proportion to 2005 (87.3%) and higher than in the 2000 (77.4%) and 1995 (79.1%) surveys. Less than half of respondents (45.4%, *n* = 49) had a written statement of objectives for their instructional program. It is important to note that 12% (*n* = 15) of survey participants did not respond to this survey question. When "non-respondents" for this survey item were taken into account, the percentage of respondents with a written statement of objectives dropped to 39.8%. This adjusted percentage was still higher than in the three previous surveys (33.2% in 2005, 21.2% in 2000, and 27.8% in 1995), but remained relatively low.

The client groups upon which the libraries' instructional programs were focused are summarized in Table 2. In keeping with previous surveys, first-year students continued to be the priority focus, followed by undergraduates in certain disciplines. The focus on teaching staff (faculty) was slightly lower than in 2005 and 2000. This is a disturbing trend for two reasons: Faculty certainly require assistance in developing IL skills (although they are unlikely to recognize the benefits in time savings and effective information retrieval that might accrue with enhanced IL skills), and faculty are the decision-makers with respect to curricular content. Librarians remain dependent on teaching faculty for access to students and for "space" in the curriculum and in courses in which to insert IL education. To the degree that faculty come to understand the value of IL skills, librarians' efforts to attach ILI to campus curricula will be facilitated.

The proportion of undergraduate students whom respondents indicated they reached by instruction is summarized in Table 3. Of the 119 survey participants who responded to this question, the majority indicated that they reached 50% or more of their undergraduate student population with their instruction program(s). This finding is similar to the proportion in 2005.

Investment in instruction

The types of staff doing instruction are summarized in Table 4. The proportion of full-time instruction librarians has continued to increase over the past 15 years (18.6% in 2005, 6.3% in 2000, and 7.9% in 1995). As well, the proportion of other staff librarians providing instruction increased significantly from

Table 2: Client groups receiving instructional focus (in order of percentage)

Client group	1995,%[a]	2000,%	2005,%	2011,% (*n*)
First-year students	56.0	84.6	78.4	71.5 (88)
Undergraduates in certain disciplines	-	59.1	71.9	64.2 (79)
Postgraduate students	40.0	-	41.2	-
Graduate students	-	-	-	46.3 (57)
Teaching staff (faculty)	34.0	46.6	46.7	40.7 (50)
Adult re-entry students	37.0	40.4	35.7	28.5 (35)
Other	-	-	21.2	19.5 (24)

Table 3: Proportion of undergraduate students reached by instructional program

Proportion of undergraduate students	2005,%	2011,% (*n*)
76–100%	26.8	27.7 (33)
50–75%	28.3	28.6 (34)
Less than 50%	33.8	26.9 (32)
Not able to determine	10.1	11.8 (14)
Other[a]	2.0	5.0 (6)

[a] This category was selected by those institutions who, for instance, do not have an undergraduate program. Some respondents also used this category to provide more specific information about the percentage of undergraduates in their program.

Table 4: Types of staff doing instruction

Type of staff	2005,%[a]	2011,% (*n*)
Other librarians on staff	21.6	53 (41.5)
Reference/public service librarians	74.4	41.5 (51)
Other staff[b]	35.7	36.6 (45)
Full-time instruction librarian(s)	18.6	29.3 (36)

[a] Total percentage exceeds 100% as respondents could select more than one category.
[b] Primarily technicians.

Table 5: Staff time spent on instruction at the start and through the academic year

Staff time spent on instruction	Start of academic year, % (*n*)	Remainder of academic year, % (*n*)
0–25%	23.8 (29)	79.5 (97)
26–50%	49.2 (60)	16.4 (20)
51–75%	20.5 (25)	3.3 (4)
More than 75%	6.6 (8)	0.8 (1)

2005. There was a notable decrease in the proportion of reference/public service librarians doing instruction compared to the 2005 survey.

Table 5 summarizes the proportion of staff time spent on instruction at the start and during the remainder of the academic year. For almost half of respondents, 26–50% of staff time was spent on instruction at the start of the academic year; this dropped to 25% or less during the remainder of the year for the majority of the staff.

In terms of evaluating the effectiveness of instruction programs, 29.3% (n = 36) of respondents indicated that they do no evaluation. This is a significantly higher proportion than previously reported in 2005 (13.6%, n = 27) although not as high as in the 1995 and 2000 surveys (40.6% and 41.3%, respectively). As in previous surveys, a large proportion of respondents indicated that they employed informal feedback from faculty to evaluate instruction. Types of evaluation are summarized in Table 6. "Other" types of evaluation reported included peer evaluation, formal evaluations by students, and LibQUAL+ standardized assessment. Proportions of evaluation types were lower right across the board.

Table 6: Evaluation of instruction

Type of evaluation	1995, %	2000, %	2005, %	2011, % (*n*)
Informally from feedback received from faculty	70.6	76.0	79.9	61.8 (76)
Informally from feedback received from students	71.9	70.2	70.4	55.3 (68)
Self-evaluation by individual instructors/librarians	40.6	41.3	41.7	39.0 (48)
With feedback questionnaires to students	39.4	34.6	41.7	33.3 (41)
By testing students on what they have learned	26.4	25.5	28.1	-
By reviewing student learning assessment results	-	-	-	13.8 (17)
With feedback questionnaires to faculty	10.6	16.3	15.1	11.4 (14)
Other	-	-	8.5	6.5 (8)
We do no evaluations	40.6	41.3	13.6	29.3 (36)

Table 7: Assessment of instruction

Type of assessment	2011,% (*n*)
Through information literacy assignments	31.7 (39)
Through formative assessment during in-class sessions	29.3 (36)
Through student self-assessment	27.6 (34)
Through questions and activities integrated into course assignments	26.0 (32)
Through quizzes/tests	24.4 (30)
By comparing pre- and post-instruction test results	13.8 (17)
Other	13.0 (16)
We do no assessments	35.8 (44)

There is a possibility that libraries were using fewer evaluation types within a single institution in 2011 (whereas in 1995 and 2000, even though a larger proportion of respondents were not doing evaluations, those who were may have been using multiple types).

In addition to the question about evaluation of instruction effectiveness, respondents in the 2011 survey were asked about instruction assessment at their library. More than one-third of respondents (35.8%, $n = 44$) reported that they did no assessments. The types of assessment are summarized in Table 7. "Other" types of assessment included informal quizzes in class, institutional surveys, and end-of-session, end-of-term, and annual feedback forms.

Six respondents (5%) reported that their library was provided with distinct (i.e., separately budgeted) funding to provide instruction. This was a higher response rate than in 2005, lower than in 2000 (11.1%), and similar to 1995 (5.6%). One respondent stated that 20% of the budget was dedicated to instruction; another reported 5%. One stated that a "tiny, tiny bit" (all quotes from respondents are reported verbatim) of the budget was dedicated to support instruction to first-year students, and one respondent indicated that funding was part of librarians' salaries. The majority of respondents indicated that they received some degree of non-financial support for instruction. The proportions of respondent libraries receiving full support, moderate support, or no support was slightly lower than that reported in 2005, but the proportion receiving very little support was more than double what it was in 2005. Forty-two percent ($n = 50$)

Table 8: Publicity for instruction

Type of publicity	1995, %	2000, %	2005, %	2011, % (*n*)
Personal faculty contact	83	76.0	89.4	91.1 (112)
Notices or letters to faculty	70	71.2	73.2	68.3 (84)
Notices on web	-	42.3	57.1	49.6 (61)
Posters	-	44.7	39.9	23.6 (29)
Notices in campus newspaper	42.0	34.6	25.3	22.8 (28)
Other[a]	-	-	22.2	17.9 (22)

[a] Included primarily electronic media (e.g., social media tools, e-mail, student electronic mailing lists), and integration within course schedules/calendar/registration materials.

Table 9: Mean importance rank for instructional objectives

Objective	Mean rank (1 = highest)	
	2005	2011
Teach students how to find information in various sources	2.04	1.71 (SD[a] = 1.051)
Teach students general research strategies	2.33	1.85 (SD = 1.113)
Teach students how to critically evaluate the quality and usefulness of information	3.27	2.02 (SD = 1.263)
Other[b]	-	2.23 (SD = 1.787)
Teach students how to locate materials in the library	2.84	2.26 (SD = 1.332)
Teach students how databases in general are structured	4.07	3.32 (SD = 1.664)
Teach awareness of technological innovations	5.51	4.19 (SD = 1.599)

[a] standard deviation.

[b] The majority of responses in this category related to the ethical use of information (i.e., citation practices, respecting copyright, and avoiding plagiarism).

indicated that they received *full support*, down from 48% in 2005; 31.1% (*n* = 37) received *moderate support*, down from 34.7% in 2005; 20.2% (*n* = 24) got *very little support,* up significantly from 9.2% in 2005; and 6.7% (*n* = 8) got *no support*, down from 8.2% in 2005. It appears that non-financial support for instruction has waned considerably, with 26.9% of respondents indicating very little or no support in 2011, compared to 17.4% in 2005.

Personal faculty contact was indicated by the majority of respondents as a method of publicizing instruction. Table 8 summarizes the types of publicity used to promote instruction. Only 1.6% (*n* = 2) of respondents indicated that they did not purposefully promote instruction in their library.

Respondents ranked current instructional objectives as shown in Table 9. Critical evaluation moved up, and locating library materials moved down in priority compared to 2005. Otherwise, the order remained the same. Of the 118 respondents who answered the survey question, 41.5% (*n* = 49) indicated that these priorities had changed in the past few years; a similar proportion (42.4%, *n* = 50) indicated that they had not; and 16.1% (*n* = 19) said that they did not know. This contrasts with findings in the 2005 survey, at which time the largest proportion of respondents indicated that instructional priorities had not

changed. In terms of how priorities had changed, French-language respondents stated that critical evaluation of information and ethical use of information have increased in priority.

Of those responses affirming that priorities of instructional objectives had changed in the past few years, similar to 2005, the most frequently mentioned priority shift of instructional objectives was an increased emphasis on how to critically evaluate the quality and usefulness of information. Compared to 2005, more respondents indicated this change. One respondent explained that "because of information overload, it is important to stress critical evaluation of information found." None of the respondents indicated that critical evaluation of resources was a decreasing priority.

Respondents also noted a decreased emphasis on the library's physical resources and physical location, stating that "locating materials in our physical library was far more important in the past," and observing that there is now "less focus on library as place/information warehouse" and that the "focus [is] more on electronic and less on hardcopy resources." Respondents also mentioned that the focus has shifted from teaching about specific resources and databases and how they are structured, to a "more concept-focused (i.e., general research strategies)" approach. Respondents stated that there is "less emphasis on 'how the database works' to working with students on finding the information regardless of source." One respondent wrote, "I think there used to be more emphasis on how databases were structured, but that doesn't really matter anymore."

A shift in the importance of instructing about search strategies was noted, similar to findings in 2005. Three respondents noted an increase in emphasis on teaching general research strategies, while one respondent noted a decrease. Other teaching trends noted include teaching ethical use of information (citing, copyright, plagiarism) (four respondents), providing and promoting free and high-quality Internet resources (four respondents), and teaching about important and new technologies and electronic resources (four respondents).

Preferences for changes in instructional objectives are summarized in Table 10. Of the seven survey participants who included responses in the "Other" category, five stated there was no need for objectives to change. Critical appraisal moved up in importance from third to first place; otherwise, the order of objectives remained the same compared to the 2005 survey results.

Half of the respondents (50.4%, n = 60) believed that their instruction effectively met their current teaching objectives; in previous surveys, most participants responded the same way (58.1% in 2005, 52.7% in 2000, and 61.3% in 1995). Slightly more than one-quarter (26.1%, n = 31) believed that instruction did not meet the objectives, and 23.5% (n = 28) indicated that they did not know.

Topics of instruction

Topics of instruction (Table 11) focused predominantly on interacting with electronic media (online databases, catalogues, search strategies, Internet use, and electronic documents) and library use in general. Unsurprisingly, instruction

Table 10. Mean importance rank for preferred instructional objectives

Objective	Mean rank (1 = highest)	
	2005	2011
Teach students how to critically evaluate the quality and usefulness of information	2.82	1.45 (SD[a] = 0.936)
Teach students general research strategies	2.27	1.94 (SD = 1.231)
Teach students how to find information in various sources	2.29	1.98 (SD = 1.188)
Other[b]	-	2.43 (SD = 2.440)
Teach students how to locate materials in the library	3.44	3.04 (SD = 1.612)
Teach students how databases in general are structured	4.24	3.60 (SD = 1.669)
Teach awareness of technological innovations	5.50	4.09 (SD = 1.749)

[a] standard deviation

[b] The majority of respondents in this category indicated that there was no need for objectives to change.

Table 11. Topics of instruction

Topic	1995, %	2000, %	2005, %	2011, % (*n*)
Online databases	-	-	97.5	95.9 (118)
Catalogue/OPAC	90.7	89.9	96.0	89.4 (110)
Search strategies (e.g., Boolean)	-	-	-	87.0 (107)
Library use in general	92.0	85.1	89.4	86.2 (106)
The Internet/World Wide Web	52.5	84.1	83.9	81.3 (100)
Electronic documents	-	-	-	66.7 (82)
Library classification system	50.0	40.9	46.2	41.5 (51)
Other print reference materials	73.5	59.1	51.8	39.0 (48)
Other[a]	-	-	25.1	27.6 (34)
Government documents	35.8	31.7	28.1	22.0 (27)
Audio-visual materials	21.6	16.8	19.6	21.1 (26)
Print indexes or abstracts	76.5	45.7	34.7	13.0 (16)
CD-ROM resources	86.4	79.3	26.1	7.3 (9)

[a] The largest proportion of respondents indicated bibliographic citation management (process and tools) in this category.

on CD-ROM resources, print references/abstracts, and other print reference materials continued to decline.

Instructional methods

Table 12 summarizes methods used for instruction. Consistent with 2005, 2000, and 1995 survey results, individualized instruction continued to be the instruction method selected by the highest proportion of respondents. Hands-on instruction in computer labs, web tutorials, and credit courses continued on an upward trend. Videotape/CD-ROM/DVD presentations as an instruction method were up compared to 2000 and 2005; this might be attributed to the inclusion of digital media (CD-ROM and DVD) in the wording of the survey question (the category was previously limited to videotape presentations). Other

Table 12. Methods used in instruction

Topic	1995, %	2000, %	2005, %	2011, % (*n*)
Individualized instruction (one-on-one)	86.4	82.2	91.5	85.4 (105)
Hands-on instruction in computer lab	43.2	63.9	77.9	87 (70.7)
Group library tours	84.0	80.3	83.4	68.3 (84)
Group instruction focused on particular courses or subjects (in the library)		88.0	74.9	60.2 (74)
Lectures/demonstrations in subject classes	72.2	66.3	79.4	58.5 (72)
Web tutorials (formerly "computer-assisted instruction")	29.6	35.6	45.7	54.5 (67)
Pathfinders or subject guides, web-based			64.2	52. 0 (64)
Library guides or handbooks, web-based			56.3	48.8 (60)
Library guides or handbooks, paper-based			53.8	34.1 (42)
Pathfinders or subject guides, paper-based			47.4	33.3 (41)
Learning management system modules				30.9 (38)
Self-paced library tours (web)	22.8	13.9	6.5	25.2 (31)
Credit course	9.9	8.7	15.1	22.8 (28)
Videotape/CD-ROM/DVD presentations (formerly "videotape presentations")	17.3	4.3	3.0	17.1 (21)
Additions to course notes for distance students		12.5	11.1	15.4 (19)
Essay assistance (workshops)	21.6	11.1	18.1	13.8 (17)
Non-credit course	15.4	13.0	16.1	11.4 (14)
Workbook program	8.0	11.1	5.5	8.1 (10)
Other (formerly "other methods")			5.0	8.1 (10)
Posters	21.6	9.6	9.5	6.5 (8)

Table 13. Degree to which information technology has changed instruction delivery

Degree of change	2005, %	2011, % (*n*)
Not at all	4.1	4.1 (5)
Only slightly	11.3	18.7 (23)
Quite a bit	36.4	45.5 (56)
A great deal	48.2	31.7 (39)

instructional methods mentioned by respondents included library workshop series with general topics, real-time online sessions (e.g., screencasts, web-conferencing, Wimba), and reference interactions (at reference desk, via e-mail, chat).

Impact of changes in information technology on instruction

Approximately three-quarters of respondents indicated that information technology (IT) changed the way they delivered instruction quite a bit or a great deal in the last few years (Table 13). Compared to 2005, the proportions of respondents who indicated that there had been a "great deal of change" versus "quite a bit of change" was reversed. The proportion of respondents reporting that the degree of change in instruction delivery had changed "not at all" or "only slightly"

(22.8%) had almost returned to 1995 levels (23.9%, compared to 12.9% in 2000 and 15.4% in 2005).

Examples of the influence of information technology on instruction delivery changed notably from those mentioned in 2005. In 2005, four major categories of technologies were being used in instruction delivery: web resources, PowerPoint presentations, computer projectors or projector mechanisms, and laptops. In 2011, when asked to provide examples of how information technology has changed the way they deliver instruction, nearly all respondents mentioned using some kind of electronic resource to deliver instruction. Forty-seven respondents stated that they use the Internet as an instructional resource and use online tools such as self-paced tutorials that do not require students to be physically in the classroom. Instruction sessions incorporate e-resources, and delivery is more interactive in that it includes more hands-on activities in front of the computer. There were only 5 mentions of PowerPoint (compared to 31 mentions in 2005). Of those five mentions, only one respondent indicated that his or her library was using PowerPoint. In the other four statements, respondents indicated that they formerly used PowerPoint and now used different software (e.g., Prezi, mentioned by three respondents) to accomplish the same task. Several respondents mentioned other electronic instructional tools, such as Captivate and other screen casting programs, which play a role in presentation. Laptops were not mentioned by any respondents, and projectors, which were mentioned in nearly half of the responses to this question in 2005 were mentioned by few respondents in 2011. Compared to the 2005 survey, hardware (18 mentions) was not often stated as an example of how technology has changed delivery of instruction. Clickers (12 mentions) and Smart Boards (5 mentions) were the most frequently mentioned examples of computer hardware.

Respondents stated that instructional content has also changed markedly as a result of information technology (Table 14). Similar to instruction delivery, there was a decrease in the proportion of respondents who indicated that there had been "a great deal" of change and an increase in the proportion stating that there had been "quite a bit" of change when current results were compared to those in 2005.

Ninety-five respondents (77.2%) elaborated on the way that information technology had changed instruction content. Electronic and online resources and web technologies were mentioned by 68.8% (n = 53) of this question's respondents. Instruction content focused on (1) electronic/online library resources (mentioned 30 times)—this included databases and database searching

Table 14. Degree to which information technology has changed instructional content

Degree of change	2000, %	2005, %	2011, % (n)
Not at all	2.4	4.7	1.6 (2)
Only slightly	13.5	14.1	25.4 (31)
Quite a bit	44.7	37.7	43.4 (53)
A great deal	37.0	43.5	29.5 (36)

techniques (mentioned 23 times), e-books, citation management tools (both mentioned 9 times)—(2) evaluating the credibility and content of search results and websites (mentioned 13 times); and (3) social media (mentioned 9 times).

Several responses to this question overlapped with the question about technology and instruction delivery. Eight respondents stated that instruction sessions were less lecture-based and contained more practical, active participation components.

Slightly more than half of respondents (54.9%, n = 67) agreed that IT-influenced changes in instruction had increased students' interest or participation in instruction. This continued the downward trend observed over the course of previous surveys (61.3% in 2005, 75.0% in 2000, and 73.0% in 1995). A minority of respondents (15.6%, n = 19) disagreed with the statement, and almost one-third (29.5%, n = 36) stated that they did not know. Those who agreed that students' interest or participation in instruction had increased as a result of IT changes shared a consensus on a few points. First, students are comfortable with, and attracted to, information technology, so offering instruction that leverages IT is in line with this interest (20 mentions). One respondent stated that "students know how to Google, so we explain that many of our resources are listed there too and available for free to our students. It's a quick step to move students into Google Scholar." Second, IT has made instruction more interactive and hands-on; students are interested in IT related to IL when they can apply it to everyday life (19 mentions). Third, the convenience and easier access to resources is appealing to students (20 mentions). Other respondents mentioned that the variety of media available now (7 mentions), and the greater visibility of library resources (8 mentions) have helped to engage students. One unique response was that the availability of a variety of resources from many sources shows students that the world outside their library or institution is working to strengthen IL competencies, which is validating, and so students become interested.

The majority of respondents (72.3%, n = 86) indicated that the changes in instructional delivery or content brought about by IT had improved instruction, up from 68.1% in 2005. Only 6.7% (n = 8) disagreed, and 21.1% (n = 25) did not know. The latter two figures were similar to findings from 2005 (7.9% and 24.1% respectively). Increased student engagement and increased interactivity of technology were common themes among respondents. Similar to 2005, where respondents characterized instruction as being more visual, illustrative, demonstrative, interactive, and interesting/attention-grabbing, in 2011 one respondent stated, "It's easier to design instruction that appeals to a variety of senses—visual, auditory—and to make it look slick/professional without having to expend inordinate amounts of money." All of these descriptors can be associated with both increased student engagement and increased interactivity of technology, which themselves are both linked, in that interactivity generally encourages increased student engagement. This link is exhibited in the data: Of the 35 respondents that mentioned an increase in student engagement and the 20 who mentioned an increase in interactivity of technology, 15 of those respondents mentioned a simultaneous increase in both themes. Three-quarters of respondents who

reported an increase in interactivity of technology also reported an increase in student engagement, and 43% of respondents who reported an increase in student engagement also reported an increase in interactivity of technology.

Similar to results from the 2005 study, where respondents mentioned that learning had become easier and more user friendly, in 2011 many responses related to the theme of learning becoming both easier and more efficient. Nine respondents mentioned that increases in the quality of content and of delivery methods have deepened learning. Seventeen respondents stated that content has increased in amount covered, depth, and overall quality. Fourteen respondents mentioned an increase in ease and effectiveness of assessment, teaching methods, content covered, and the overall learning experience. Technology facilitating better communication among faculty, students, and library staff was another dominant theme (15 mentions). Five respondents either thought that technology had a negative impact on instruction and did not improve it or were unsure about whether these changes affected instruction in a positive or in a negative manner. Sixteen respondents indicated that technology has enhanced the quality of instruction or made the process of instruction easier. Eight respondents indicated that the process of managing or designing instruction materials has been enhanced or made easier by technology.

Beliefs about the concept of information literacy

Table 15 summarizes respondents' beliefs about the definition of information literacy and the degree of the library's responsibility to teach information literacy. Most of the respondents who indicated that instructional responsibility is shared also indicated that they thought academic libraries were partially responsible for teaching. The 2005 findings showed that students and faculty were most often named as other groups who should share responsibility with librarians. Students and faculty were also mentioned in the current survey's findings, as were subject specialists. However, the majority of respondents indicated the faculty should be sharing responsibility, with only two respondents indicating that students should be sharing responsibility for specific instruction topics: teaching how to recognize when information is needed and teaching how to understand some ethical, legal, economic, and sociopolitical information issues. One respondent indicated students' lack of responsibility in ILI, stating, "I think there is so much information available now that this does not matter to students." With respect to subject specialists, one respondent indicated that subject specialists had a degree of responsibility in teaching all of the topics listed, saying, "For all answers, it should be a partnership with the subject faculty." Another stated, "In the case of partial responsibility, I feel the subject area specialist should also be discussing discipline specific issues to do with research." In particular, respondents indicated that faculty should share responsibility in teaching "how to think critically in general," "how to critically analyze and evaluate information," and how to understand "ethical, legal, economic, and socio-political information issues." In general, respondents stated that faculty should share responsibility in teaching topics which involve broader analytical skills rather than in teaching

Table 15. Respondent beliefs about the definition of information literacy (IL) and teaching responsibility

	This is an element of IL			Libraries should take full responsibility			Libraries should take partial responsibility			Libraries should take no responsibility		
Element of IL	2000, %	2005, %	2011, % (*n*)	2000, %	2005, %	2011, % (*n*)	2000, %	2005, %	2011, % (*n*)	2000, %	2005, %	2011, % (*n*)
Recognizing when information is needed	68.8	78.6	80.5 (99)	12.9	11.4	19.3 (23)	77.2	80.3	73.1 (87)	9.9	8.3	7.6 (9)
Understanding how information is generated, organized, stored, and transmitted	70.7	72.1	70.7 (87)	52.2	50.0	43.0 (52)	39.4	42.3	52.1 (63)	8.4	7.7	5.0 (6)
Understanding some ethical, legal, economic, and socio-political information issues	53.4	64.8	67.5 (83)	8.8	9.8	15.7 (19)	76.5	74.7	78.5 (95)	14.7	14.9	5.8 (7)
Understanding that there exists a wide variety of information sources beyond the obvious	88.9	86.8	79.7 (98)	47.6	48.5	55.7 (68)	52.4	51.5	43.4 (53)	0.0	0.0	0.8 (1)
Understanding how to locate efficiently and effectively information from many sources	95.7	92.4	93.5 (115)	74.8	77.0	77.0 (94)	25.2	22.4	22.1 (27)	0.0	0.5	0.8 (1)
Understanding how to use efficiently and effectively information from many sources	89.9	87.8	92.7 (114)	45.4	41.0	54.9 (67)	51.7	57.4	42.6 (52)	2.9	1.5	2.5 (3)
Understanding how to critically analyze and evaluate information	94.2	94.4	78.9 (97)	17.5	14.8	32.2 (39)	80.1	83.2	66.9 (81)	2.4	2.0	0.8 (1)
Knowing how to think critically in general	56.3	64.0	72.4 (89)	5.4	3.6	9.1 (11)	70.0	76.0	76.9 (93)	24.6	20.4	14.0 (17)

about different kinds of information, ways to use information, and ways to find information. Responsibilities aside, one respondent expressed the importance of teaching how to understand some ethical, legal, economic, and sociopolitical information issues, stating that "librarians should teach a full credit course on this! SOOO important and not sure anyone is addressing it."

Challenges to providing instruction

Reported challenges faced in providing instruction covered an array of issues. These fell into categories similar to those in 2005, including (1) institutional challenges, particularly faculty relationships and integration of ILI into curriculum; (2) instructor-related challenges, especially time constraints; and (3) challenges related to student engagement. Challenges related to faculty relationships and time limitations were the most common.

Institutional challenges

As was the case in the 2005 survey findings, the majority of institution-related challenges related to faculty (47 responses). Lack of faculty communication, limited faculty interest, and resistance to ILI were the dominant issues:

> Classroom instruction is initiated at the request of faculty. I lobby and advertise, but this means that from year to year we have differing support and uptake. It is particularly noticeable when some faculty go on sabbatical.

> We. . . struggle with two groups of faculty: young, new professors who have bought into our active learning strategies, and those who do not feel instruction is necessary (and only see as far as the in-class variety). We have had a hard time integrating with a certain number of disciplines, resulting in an imbalance between the instructional support that different groups of students receive.

Another issue mentioned was teaching faculty's lack of awareness of library resources, "faculty thinking we have nothing in the library," and "faculty who prefer do it themselves, despite their unfamiliarity with most up-to-date research methods and resources." Another respondent commented that "getting faculty to take the time to create thoughtful assignments and structure the class time for the most effective learning" is a challenge.

Several responses noted curriculum-related issues as being challenges. Within this category, several different themes pertaining to curriculum challenges were mentioned, including:

- integrating ILI into the curriculum (15 respondents);
- staying current with constantly changing curricula (4 respondents);
- insufficient number of formal instruction workshops offered (2 respondents, one of which wrote "Limited opportunity to get into classroom - 1 session per year for target courses"); and
- insufficient resources to accommodate particular courses (4 respondents).

Integrating ILI into the curriculum was by far the most prevalent curriculum-related issue. One respondent noted the following:

> I'd like to see library instruction integrated with the curriculum more. It would be great to have a set plan of courses that address all the information literacy issues so the students don't experience duplicate workshops. I'd also like to see a credited course on information literacy that encompasses internet ethics and the copyright concerns of sharing/using/pilfering online information. I don't think professors teach this, but with students using social media programs to submit/post their work in public places, I think it's up to the universities to ensure that students are using it responsibly. I know videos from our institutions that students have created for promotional purposes have been pulled off of YouTube because the song they used was a copyright infringement. That doesn't reflect well on the institution! This is a great course for librarians to teach.

Institutional challenges within the library also focused on library staffing issues (17 respondents) and challenges arising from inadequate pedagogical skills and experience of library staff teaching ILI (5 respondents). Internal staffing was also a primary issue noted in responses to the 2005 survey. The majority of the administrative- and policy-related challenges pertained to policies not allowing for course credit to be awarded for ILI courses. Responses indicating a lack of promotion and marketing also alluded to the resulting lack of awareness of students and faculty about ILI. Two respondents noted a wide variety of institutional issues in a single response:

> Integration of IL into the curriculum, faculty perception of Librarians roles, lack of librarians pedagogical and instructional experience, lack of awareness outside the library about information literacy, lack of assessment data to demonstrate effectiveness of programs, lack of time and resources . . . .

> We are not subject specialists here, so we are not formally tied to departments for instruction. This means that we teach IL in any class that requests us (biology today, English tomorrow, sociology and marketing next week...etc.). We customize the sessions to the assignment and the course content as much as possible. This makes for a lot of prep. I would add that, beyond the classroom instruction, in which about 7 librarians participate, the rest of our IL program is provided by our department. The department is 2 librarians, a half of a staff position, and an LIS student (10 hours/week in fall/winter, half time in summer term).

Other common themes within the institutional-related challenges category included administrative- and policy-related challenges (four respondents), promotional/marketing challenges, and curriculum-related challenges. Regarding administrative challenges, a general lack of support was cited by some respondents.

Instructor-related challenges

Within the library, time is often a challenge. As one respondent put it, "Time! I am the only librarian, with only part-time clerical support." Time limitations were frequently noted, with 22 respondents indicating that difficulties in scheduling posed challenges to instruction, and 27 respondents indicating a lack of time allocated for lesson preparation or time for providing sessions themselves. One respondent described this issue as "scheduling difficulties due to the density

of course materials." Scheduling difficulties seemed to stem from a variety of areas, including complexity and mutability of course materials or curricula, faculty-related issues—such as when faculty are waiting "until the last minute to set assignments and book library instruction sessions"—inadequate number of library staff members, unreasonable faculty expectations, short notice from faculty, faculty not seeing value in ILL instruction, and inadequate time allotted for instruction. One respondent noted that a challenge is "gaining time in the classroom. Faculty feel they cover these topics themselves or their other material is too important to give up time to library instruction."

Student-related challenges

Lack of student interest and engagement was also an issue for 18 respondents. One respondent noted "lack of interest from student body; apathy from faculty" as a major issue. Many of the responses which mentioned a lack of student interest also mentioned a lack of faculty interest (five respondents), suggesting a possible relationship between the two. Students' failure to perceive the relevance of ILL instruction was also a recurring theme within this category (five respondents). One respondent noted, "Often it is offered to early in the semester of the 1st year students. They don't understand how relevant it is for their studies until mid-way through that semester or the second semester. The classes are in a lab and the students are distracted by you tube, facebook, etc." This comment is reminiscent of one of the findings in the 2005 study, in which respondents commented on students being "bored." One 2011 respondent indicated that relevance issues were confined not only to perceived relevance but to the actual relevance of the instruction content, noting that one challenge is "keeping content relevant - making sure I focus on what the students need to know as opposed to what I think they should know. I generally always teach to assignments."

Several respondents described students as "distracted" and having "short attention spans" (five respondents), a strong trend not present in the 2005 survey findings, although related to the common issue in the 2005 survey findings of students being "bored." Another theme within this category, which echoes a theme in the 2005 survey findings, was the range of student needs being too diverse (13 respondents). In addition to issues of "meeting various students' needs vis-à-vis learning/teaching styles," more specific student needs were identified. These included the needs of students in distance learning programs, students' different learning styles, students' experience and skill levels, and the differing needs of students from a variety of disciplines.

Compared to the 2005 findings, significantly fewer respondents noted challenges related to facilities, with only seven respondents noting issues such as lack of space (two responses), lack of general resources (four responses, one specifically indicating "poor collection"), and computer lab design (one response). Similarly, in contrast to the 2005 survey findings, only three respondents mentioned technology-related challenges. One respondent stated that an issue was the need to "constantly redo presentations to accommodate technological changes."

Another expressed similar opinions, detailing such issues as "changes in library websites and databases; keeping up with current technologies and presentation tools." For some respondents, change in general was a significant challenge: "Changes in the curricula; changes in sessional teaching staff; changes in library websites and databases; keeping up with current technologies and presentation tools."

General comments

Forty-five respondents offered final comments; these were diverse and were related mainly to the following categories: (1) integration of ILI into curriculum; (2) relationships between the library and faculty, administration, and other campus services; (3) perceived value of ILI; (4) coordination of IL services; (5) time/staffing constraints; and (6) assessment and evaluation.

The most frequently mentioned observation was that ILI is, or is becoming, integrated into courses and student orientation sessions (n = 10), echoing the 2005 study data. Five respondents stated that ILI needs to be more integrated into course planning and assignments—in other words, that IL needs to be perceived as a core skill or become a program requirement.

Five respondents stated that collaborative partnerships between the library, faculty, and other campus services already exist or are being developed. As one individual noted, "We are also very fortunate to have excellent support from the library's administration, as well as from many of our academic departments. We also have developed excellent relationships with the writing centre, student services, and teaching and learning." Six respondents stated that there is a need for more collaboration, and one mentioned that "some faculty are reluctant to partner with librarians in designing effective assignments."

Some respondents stated that ILI is valued and three mentioned that there is an increasing demand for ILI at their institutions. Two respondents commented that IL is perceived as a priority. One said, "Instruction is a significant focus within our strategic plan. This focus helps us to move activities forward in this area, which is wonderful. And, we do have campus partners who are also very supportive and work collaboratively with the Library on a range of projects and initiatives. This does help us improve our skills, get more integrated into online learning environments, etc." Another stated, "The University has given us funding this past year to develop strategic plan for IL and the future looks promising."

Other respondents specifically mentioned that ILI is not valued or understood by their institution, administration or faculty (n = 5). For example, one comment read, "Instruction in the use of information resources is generally considered an afterthought not one that needs to be a part of course planning and program planning." Another respondent mentioned, "There is no top-down recognition of the ACRL [Association of College and Research Libraries] IL Standards, which poses some challenges."

There were five comments related to the usefulness of having a dedicated IL person, team, or committee to deliver instruction and to take things forward to

faculty and teaching committees. One comment noted, "We are just in the process of assigning responsibility for development of the instruction program to a librarian (no one has been responsible for the overall program and development for many years). I think that this will make a huge difference and help us advance our program."

Two comments described challenges arising from the lack of coordination. One noted, "Our institution does not have a university-wide information literacy coordinator, which means that efforts and effectiveness of instruction varies greatly across the system." This sentiment echoes those expressed in the 2005 survey. Time and staffing constraints were mentioned by six respondents. One commented, "It [ILI] is a valued part of our library practice but do not feel as if its full potential has been reached, due to time constraints with instructors and courses." Another two respondents commented on the need to develop or improve IL assessment tools, and one mentioned, "Instruction assessment and evaluation varies depending on the person who conducts the instruction and the course/subject/assignment that requires the instruction."

Conclusions

Discernible trends of particular interest include a small increase in the proportion of respondents with written objectives for their instruction, an indication that full-time instructional librarians are more common, greater numbers of for-credit courses being offered (but fewer tours), and more libraries doing at least minimal evaluation of their ILI. Publicity for ILI has expanded with new opportunities, particularly social media. Unfortunately, there is less distinct funding for ILI and lower levels of support overall, a finding that seems at odds with increasing recognition of the importance of information literacy skills, and the centrality of ILI in academic libraries. Challenges are remarkably consistent with data from the earlier surveys, including difficult relationships with teaching faculty and time pressures. In addition, challenges remain in aligning instructional practices with current approaches to outcomes assessment; in the absence of articulated instructional objectives and formal evaluation and assessment measures, confidence in instructional outcomes is on rather shaky ground.

These data are comparable with data from national surveys done elsewhere. For example, in the United Kingdom, a significant challenge is getting teaching faculty to understand that "osmosis" is not an effective method of learning (DaCosta 2010, 218). A survey from India (Pattar and Kanamadi 2010) reports that ILI methods are quite traditional, including lectures and tours at the start of the academic year. In that survey, topics of instruction included a general introduction to the library, to information sources, and to searching; evaluation of ILI is minimal or non-existent. An Irish survey (McGuinness 2009), which is directly comparable to the one reported here because question items were parallel, found that training for ILI is mostly informal and that ILI is mostly treated as a separate subject rather than integrated into courses. Common methods include tours and the one-shot lecture. The most important instructional goal is to develop awareness of a range of information sources, and evaluation is mostly informal.

Challenges include integrating ILI into curricula and working with teaching faculty. A Tanzanian study (Lwehabura and Stilwell 2008) reports similar challenges, including a lack of resources, lack of information literacy policy, lack of proactive library staff, and insufficient staff training. In South Africa (Jiyane and Onyancha 2010, 16) ILI is mostly informal and focuses on how to use a library, computer skills, and orientation to a library's services and products (how to use the library). Challenges include students' lack of basic IT skills, generating student interest in ILI, lack of resources, and getting support from teaching faculty. Despite some minor differences (many of which are easily attributable to contextual variation), what is remarkable is the degree to which practices, issues, and challenges are consistent around the globe.

The value of this longitudinal study lies largely in practical terms, although it does raise several questions and issues meriting further research. The data are useful to inform syllabus development for courses that prepare future librarians for instructional work, since the data reflect frontline practices and conditions. The survey also helps to develop awareness of ongoing issues and challenges faced by practitioners, as well as to identify gaps in their preparation that may be addressed by educators of librarians. Results from this study may also be used as benchmark data against which practitioners can compare their own practices. Finally, longitudinal data collection is valuable for identifying trends and opportunities. There is little longitudinal research in information science, so this series of studies contributes to understanding the history and development of a particular, and increasingly core, area of practice. Currently, the researchers' plan is to continue collecting these data in intervals of approximately five years. Longitudinally, these data should continue to contribute to these practical goals. Comparable current US data are unavailable, so future research could seek to duplicate this data collection in that context. The example of this sequence of studies may also motivate similar longitudinal examination of practice in other areas of information science.

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Appendix 1: Survey of information literacy instruction practices in Canadian academic libraries, 2011

Welcome,

This survey is the third in a longitudinal series intended to gauge views on information literacy instruction and the provision of that instruction in Canadian academic libraries. Previous versions of the survey were carried out in 1999 and 2005. All responses will be kept confidential. You have received an invitation to participate in this survey because your library has been identified as being part of an academic institution.

1. Your library is associated with a:

   ☐ college or technical institute
   ☐ university
   ☐ other, (please state)

2. What is the size of the undergraduate student population at your institution?

   ☐ fewer than 10,000
   ☐ 10,000 – 20,000
   ☐ more than 20,000

3. What is your job title?
4. If your library focuses on a particular discipline(s) or subject area(s), please indicate?
5. Does your college or university library offer formal (i.e., scheduled in advance) instructional classes?

   ☐ yes
   ☐ no

5A. Please indicate briefly why you think there is no formal instructional program at your library.

6. Do you have a written statement of the objectives of your instructional program?

   ☐ yes
   ☐ no

7. Does your library routinely provide informal instruction (i.e., one-to-one, ad hoc instruction) via subject guides (online and/or paper), point-of-use instruction, etc.?

   ☐ yes
   ☐ no

8. Who is primarily responsible for instruction in your library? (check all that apply)

   ☐ full-time instruction librarian(s) ☐ reference/public service librarians
   ☐ other librarians on staff ☐ other staff, please specify

9A. Please estimate the proportion of staff time spent on instruction at the **start** of academic terms, for those staff involved in instruction (other than full-time instruction staff).

☐ 0–25% ☐ 26–50% ☐ 51–75% ☐ more than 75%

9B. Please estimate the proportion of staff time spent on instruction during the **remainder** of the academic year, for those staff involved in instruction (other than full-time instructional staff).

☐ 0–25% ☐ 26–50% ☐ 51–75% ☐ more than 75%

10. For which of the following do you commonly provide instruction? (check all that apply)

☐ print indexes or abstracts ☐other print reference materials
☐ audio-visual materials ☐ catalogue/OPAC
☐ CD-ROM resources ☐ the internet/world-wide-web
☐ government documents ☐ library use in general
☐ library classification system ☐ electronic documents
☐ online databases ☐ search strategies (e.g. Boolean)
☐ other, please specify

11. Which of the following methods do you use in your instruction? (check all that apply)

☐ web tutorials ☐ credit course
☐ hands-on instruction in computer lab ☐ non-credit course
☐ individualized instruction (one-on-one) ☐ posters
☐ learning management system modules ☐ group library tours
☐ videotape/CD-Rom/DVD presentations ☐ library guides or handbooks
☐ self-paced library tours ☐ web?☐ paper?
☐ workbook program ☐ pathfinders or subject guides
☐ lectures / demonstrations in subject classes ☐ web?☐ paper?
☐ essay assistance (workshops)
☐ additions to course notes for distance students
☐ group instruction focused on particular courses or subjects [in the library]
☐ other, please specify

12. On what group(s) does your instructional program focus? (check all that apply)

☐ first year students ☐ adult re-entry students
☐ undergraduates in certain subject disciplines ☐ postgraduate students
☐ teaching staff (faculty)
☐other, please specify

13. Overall, what proportion of undergraduate students do you estimate that you reach in your instructional program?

☐ 76–100% ☐ 50–75% ☐ fewer than 50%
☐ not able to determine ☐ other, please explain

14. How much has information technology changed the way you **deliver** instruction in the last few years?

☐ not at all ☐ only slightly ☐ quite a bit ☐ a great deal

15. If information technology has changed the way you deliver instruction, can you give an example?
16. How much has information technology affected the **content** of your instruction in the last few years?

☐ not at all ☐ only slightly ☐ quite a bit ☐ a great deal

17. If information technology has changed the content of your instruction, can you give an example?
18. If information technology has changed either the delivery or content of your instruction, do you think that these changes have increased students' **interest or participation** in instruction?

☐ yes
☐ no
☐ don't know

18A. Please explain briefly how you these changes have increased students' interest or participation.

19. If information technology has changed either the delivery or content of your instruction, do you think that these changes have **improved** instruction?

☐ yes
☐ no
☐ don't know

19A. Please explain briefly how you these changes have improved instruction.

20. What are the objectives (explicitly written or not) of your current instruction? Please rank from 1 (most important) to 6 (least important)

	1	2	3	4	5	6
Teach awareness of technological innovations						
Teach students how databases in general are structured						
Teach students how to find information in various sources						
Teach students how to locate materials in the library						
Teach students how to critically evaluate the quality and usefulness of information						
Teach students general research strategies						
Other, please state						

21. Have these priorities changed in the past few years?

☐ yes, how?
☐ no
☐ don't know

22. How would you like to see the objectives (written or not) of your instruction **change**? Please rank from 1 (should be most important) to 6 (should be least important)

	1	2	3	4	5	6
Teach awareness of technological innovations						
Teach students how databases in general are structured						
Teach students how to find information in various sources						
Teach students how to locate materials in the library						
Teach students how to critically evaluate the quality and usefulness of information						
Teach students general research strategies						
Other, please state						

23. Which of the following would you include in your definition of "information literacy"? (check all that apply)

☐ recognizing when information is needed
☐ understanding how information is generated, organized, stored, and transmitted
☐ understanding some ethical, legal, economic, and socio-political information issues
☐ understanding that there exists a wide variety of information sources beyond the obvious
☐ understanding how to locate efficiently and effectively information from many sources
☐ understanding how to use efficiently and effectively information from many sources
☐ understanding how to critically analyze and evaluate information
☐ knowing how to think critically in general
☐ other?
☐ other?

24. What should be the degree of responsibility of academic libraries in teaching the following?

	None	Full	Partial	If this responsibility is shared, who else is responsible?
a) recognizing when information is needed				
b) understanding how information is generated, organized, stored, and transmitted				
c) understanding some ethical, legal, economic, and socio-political information issues				
d) understanding that there exists a wide variety of information sources beyond the obvious				
e) understanding how to locate efficiently and effectively information from many sources				
f) understanding how to use efficiently and effectively information from many sources				
g) understanding how to critically analyze and evaluate information				
h) knowing how to think critically in general				
i) other?_____				
j) other?_____				

25. Do you believe that your institution effectively meets its current teaching objectives?

☐ yes
☐ no
☐ don't know

26. How do you assess student learning in your instruction program? (check all that apply)

☐ we do no assessments
☐ through student self-assessment
☐ by comparing pre- and post-instruction test results
☐ through formative assessment during in-class sessions
☐ through quizzes/tests
☐ through information literacy assignments
☐ through questions and activities integrated into course assignments and exams
☐ other

27. How do you evaluate the effectiveness of your library's instruction program? (check all that apply)

☐ we do no evaluations
☐ self-evaluation by individual instructors/librarians
☐ informally from feedback received from faculty

- ☐ informally from feedback received from students
- ☐ by reviewing student learning assessment results
- ☐ with feedback questionnaires to faculty
- ☐ with feedback questionnaires to students
- ☐ other

28. Is instruction in your library provided with distinct funding in the library budget?

- ☐ yes – what proportion of the budget is dedicated to instruction?
- ☐ no
- ☐ don't know

29. How much non-financial support (e.g., administrative support, recognition, encouragement) does your library administration provide for instructional activities?

- ☐ full support
- ☐ moderate support
- ☐ very little support
- ☐ no support

30. How do you publicize instructional programs in your library? (check all that apply)

- ☐ personal faculty contact
- ☐ notices or letters to faculty
- ☐ notices in campus newspaper
- ☐ notices on web
- ☐ posters
- ☐ other
- ☐ we do not purposefully promote instruction in our library

31. What are some of the challenges you face as you try to provide instruction?
32. Do you have any other comments about instruction at your campus?

This concludes the survey. Thank you for your participation.

Appendix 2: Enquête des habitudes d'instruction en litératie informationnelle dans les bibliothèques académiques canadiennes 2011

Bienvenue,

Cette enquête est la troisième dans le cadre d'une série longitudinale ayant le but d'évaluer les opinions sur l'instruction en litératie informationnelle dans les bibliothèques académiques canadiennes. Les versions précédentes de cette enquête se sont réalisées en 1999 et en 2005. Toutes les réponses resteront confidentielles. Vous avez reçu une invitation à participer à cette enquête parce que votre bibliothèque fait partie d'une institution académique.

1. Votre bibliothèque est associée à:

   ☐ un collège ou à un institut de technologie
   ☐ une université
   ☐ autre (veuillez préciser)

2. Quelle est la population d'étudiants de premier cycle de votre établissement?

   ☐ moins de10,000
   ☐ de 10,000 à 20,000
   ☐ plus de 20,000

3. Quel est le nom attribué à votre poste?
4. Veuillez indiquer les disciplines ou domaines de spécialisation de votre bibliothèque, s'il y a lieu.
5. Votre bibliothèque collégiale ou universitaire donne-t-elle des cours d'instruction formels (c.-à-d. planifiés d'avance)?

   ☐ oui
   ☐ non

5A. Veuillez justifier brièvement pourquoi vous pensez qu'il n'y a pas de programme formel d'instruction.

6. Avez-vous un énoncé écrit des objectifs de votre programme d'instruction?

   ☐ oui
   ☐ non

7. Votre bibliothèque offre-t-elle couramment de l'instruction informelle (c.-à-d. formation individuelle, ad hoc) par des guides sujets (en ligne et/ou sur papier), de l'instruction auprès de l'usager, etc.?

   ☐ oui
   ☐ non

8. Qui se charge principalement de l'instruction dans votre bibliothèque? (cochez les cases appropriées)

   ☐ bibliothécaire(s)-enseignant(s) à plein temps
   ☐ bibliothécaires de référence ou de services au public

☐ d'autres bibliothécaires membres du personnel
☐ d'autres employés, veuillez préciser

9A. Veuillez estimer le pourcentage de l'emploi du temps attribué à l'instruction au début des semestres universitaires seulement chez le personnel qui participe à l'instruction (c.-à-d. autre que le personnel chargé de l'instruction à plein temps).

☐ 0–25% ☐ 26–50% ☐51–75% ☐ plus de 75%

9B. Veuillez estimer le pourcentage de l'emploi du temps attribué à l'instruction pendant le reste de l'année universitaire seulement chez le personnel qui participe à l'instruction (c.-à-d. autre que le personnel chargé de l'instruction à plein temps).

☐ 0–25% ☐ 26–50% ☐51–75% ☐ plus de 75%

10. L'instruction que vous offrez normalement facilite l'usage desquelles des ressources ci-dessous? (cochez les cases pertinentes)

☐ les index et résumés imprimés ☐ autres ressources de référence imprimées
☐ l'équipement audio-visuel ☐ le catalogue ou le catalogue public en ligne
☐ les ressources sur CD-ROM ☐ l'internet ou le web
☐ les documents gouvernementaux ☐ la bibliothèque en général
☐ le système de classification documentaire ☐ les documents électroniques
☐ les bases de données en ligne ☐ les stratégies de recherche (par ex. booléenne)
☐ autre, veuillez préciser

11. Desquelles méthodes d'enseignement vous servez-vous? (cochez les cases pertinentes)

☐ tutoriels sur le web ☐ cours à unité
☐ enseignement pratique en laboratoire informatique ☐ cours sans unité
☐ enseignement individualisé (un seul usager) ☐ affiches
☐ module de système de gestion de l'apprentissage ☐ visite en groupe de la bibliothèque
☐ présentations sur bande vidéo/CD-Rom/DVD ☐ guides ou manuels de bibliothèque
☐ visite auto-rythmée de la bibliothèque ☐ web?☐ papier?
☐ apprentissage par cahier d'exercices ☐ info-guides ou guides thématiques
☐ exposés magistraux / démonstrations en salle de classe ☐ web?☐ papier?
☐ aide à la rédaction (ateliers)

☐ suppléments aux notes de cours pour les étudiants à distance
☐ enseignement de groupes axé sur des cours ou des domaines spécifiques [en bibliothèque]
☐ autre, veuillez préciser

12. Quels groupe(s) d'usagers votre programme de formation vise-t-il? (cochez les cases pertinentes)

☐ étudiants en 1re année universitaire ☐ étudiants adultes qui poursuivent leurs études
☐ étudiants de 1er cycle selon les domaines ☐ étudiants des cycles supérieurs
☐ le personnel enseignant (corps professoral)
☐ autre, veuillez préciser

13. Sur l'ensemble, quel pourcentage des étudiants de 1er cycle estimez-vous atteindre par votre programme de formation?

☐ 76–100% ☐50–75% ☐ moins de 50%
☐ impossible à déterminer ☐ autre, veuillez préciser

14. Comment la technologie de l'information a-t-elle modifié vos méthodes d'enseignement dans les dernières années?

☐ pas du tout ☐ quelque peu ☐ assez ☐ beaucoup

15. Si la technologie de l'information a modifié vos méthodes d'enseignement, veuillez donner un exemple de ce changement.
16. Quel effet la technologie de l'information a-t-elle eu sur le contenu de votre enseignement dans les dernières années?

☐ aucun ☐ un peu ☐ assez ☐ beaucoup

17. Si la technologie de l'information a modifié le contenu de votre enseignement, veuillez donner un exemple de ce changement.
18. Si la technologie de l'information a modifié les méthodes ou le contenu de votre enseignement, croyez-vous que ces changements ont augmenté l'intérêt ou la participation des étudiants dans l'enseignement?

☐ oui
☐ non
☐ je ne sais pas

18A. Veuillez expliquer comment ces changements ont augmenté l'intérêt ou la participation des étudiants.
19. Si la technologie de l'information a modifié les méthodes ou le contenu de votre enseignement, croyez-vous que ces changements ont amélioré l'enseignement?

☐ oui
☐ non
☐ je ne sais pas

19A. Veuillez expliquer comment ces changements ont amélioré l'enseignement.

20. Quels sont les objectifs (clairement énoncés ou non) de votre enseignement actuel? Veuillez les classer de 1 (le plus important) à 6 (le moins important).

	1	2	3	4	5	6
Visent l'éveil aux innovations technologiques						
Apprennent aux étudiants l'organisation des bases de données en général						
Apprennent aux étudiants comment trouver de l'information dans plusieurs ressources						
Apprennent aux étudiants comment trouver des ressources en bibliothèque						
Apprennent aux étudiants comment évaluer d'un œil critique la qualité et l'utilité de l'information						
Apprennent aux étudiants des stratégies générales de recherche						
Autre, veuillez préciser						

21. Ces priorités ont-elles changé dans les dernières années?

☐ oui, comment?
☐ non
☐ je ne sais pas

22. Quels changements aimeriez-vous apporter aux objectifs (énoncés ou non) de votre enseignement? Veuillez les classer de 1 (devrait être le plus important) à 6 (devrait être le moins important).

	1	2	3	4	5	6
Visent l'éveil aux innovations technologiques						
Apprennent aux étudiants l'organisation des bases de données en général						
Apprennent aux étudiants comment trouver de l'information dans plusieurs ressources						
Apprennent aux étudiants comment trouver des ressources en bibliothèque						
Apprennent aux étudiants comment évaluer d'un œil critique la qualité et l'utilité de l'information						
Apprennent aux étudiants des stratégies générales de recherche						
Autre, veuillez préciser						

23. Lesquels des points suivants incluriez-vous dans votre définition de "littératie informationnelle"? (cochez les cases pertinentes)

☐ reconnaître un besoin d'information
☐ comprendre comment l'information est produite, organisée, recueillie et communiquée
☐ comprendre comment l'éthique, le droit, l'économie et la socio-politique se rapportent à l'information
☐ comprendre qu'il existe une grande variété de sources d'information outre les plus évidentes
☐ comprendre comment trouver efficacement de l'information de plusieurs sources

- ☐ comprendre comment utiliser efficacement l'information de plusieurs sources
- ☐ comprendre comment analyser et évaluer l'information de manière critique
- ☐ savoir comment exercer la pensée critique en général
- ☐ autre?
- ☐ autre?

24. Quel devrait être la responsabilité des bibliothèques académiques face à l'enseignement des objectifs suivants?

	Aucune	Complète	Partielle	Si vous répartissez la responsabilité de cet objectif, qui d'autre en est responsable?
a) reconnaître un besoin d'information				
b) comprendre comment l'information est produite, organisée, recueillie et communiquée				
c) comprendre comment l'éthique, le droit, l'économie et la socio-politique se rapportent à l'information				
d) comprendre qu'il existe une grande variété de sources d'information outre les plus évidentes				
e) comprendre comment trouver efficacement de l'information de plusieurs sources				
f) comprendre comment utiliser efficacement l'information de plusieurs sources				
g) comprendre comment analyser et évaluer l'information de manière critique				
h) savoir comment exercer la pensée critique en général				
i) autre?				
j) autre?				

25. Croyez-vous que votre institution atteint efficacement les objectifs pédagogiques qu'elle s'est fixés?

- ☐ oui
- ☐ non
- ☐ je ne sais pas

26. Comment évaluez-vous l'apprentissage des étudiants dans votre programme d'enseignement? (cochez les cases pertinentes)

- ☐ nous ne l'évaluons pas
- ☐ auto-évaluation par les étudiants
- ☐ en comparant les résultats des examens passés avant et après l'enseignement
- ☐ par des formulaires d'évaluation complétés pendant le cours
- ☐ par des quiz et des examens
- ☐ par des devoirs portant sur la littératie informationnelle
- ☐ par des questions et des activités proposées dans le contexte des devoirs et des examens
- ☐ autre

27. Comment évaluez-vous l'efficacité du programme d'enseignement de votre bibliothèque? (cochez les cases pertinentes)

- ☐ nous ne l'évaluons pas
- ☐ auto-évaluation par chaque enseignant ou bibliothécaire
- ☐ de façon informelle à partir de la rétroaction reçue du corps professoral
- ☐ de façon informelle à partir de la rétroaction reçue d'étudiants
- ☐ en vérifiant les résultats de l'évaluation de l'apprentissage des étudiants
- ☐ par un questionnaire de rétroaction envoyé au corps professoral
- ☐ par un questionnaire de rétroaction envoyé aux étudiants
- ☐ autre

28. L'enseignement dans votre bibliothèque bénéficie-t-il d'un financement budgétaire distinct?

- ☐ oui – quelle proportion du budget est allouée à l'enseignement?
- ☐ non
- ☐ je ne sais pas

29. Combien de soutien non-financier (c.-à-d. soutien administratif, reconnaissance, encouragement) l'administration de votre bibliothèque vous apporte-t-elle dans vos activités pédagogiques?

- ☐ soutien total
- ☐ soutien moyen
- ☐ peu de soutien
- ☐ aucun soutien

30. Comment faites-vous la publicité de vos programmes d'enseignement dans votre bibliothèque? (cochez les cases pertinentes)

- ☐ contact personnel avec le corps professoral
- ☐ annonces ou lettres au corps professoral
- ☐ annonces dans le journal universitaire
- ☐ annonces sur Internet

- ☐ affiches
- ☐ autre
- ☐ nous ne faisons pas délibérément de la publicité pour l'enseignement de notre bibliothèque

31. Quels sont certains obstacles que vous devez affronter en assurant l'enseignement de votre bibliothèque?
32. Avez-vous des commentaires à ajouter au sujet de l'enseignement à votre université?

L'enquête est maintenant complète. Nous vous remercions de votre participation.