



How Canadian librarians practice and assess individualized research consultations in academic libraries: a nationwide survey

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Performance Measurement and Metrics

Introduction

Despite living in a digital era, libraries offer significant hours of in-person reference services, in combination with online reference services. Nevertheless, an increase in requests for in-person individualized research consultations (IRCs) over the last few years has been observed. Based on experience and previous literature, the authors have defined individualized research consultations (IRCs) as scheduled appointments that aim at helping researchers and students with their research projects, including, but not limited to, the literature review process. The increase in requests could be explained in several ways, including the transition from a service point with librarians to paraprofessionals staffing the reference desk with success (Arndt 2010), or a more specialized and tailored service offered through research guides, where students can directly access their subject specialists for help and guidance. IRCs can be deemed useful for patrons, as they are tailored to their specific needs, however, they can also be time consuming for the librarians. Therefore, it is important to evaluate this service, and assess its impact in order to ensure that the users are getting the most out of their sessions.

Literature Review

In order to compare the internal practices of individualized research consultations at the University of Ottawa library to those at other institutions, we have conducted a retrospective scoping review of the literature, identifying 20 articles (see Appendix 1) discussing in detail an analysis of the individualized research consultation methods of assessment. The scoping review will be published in the December 2015 issue of the Evidence Based Library and Information Practice journal.

From the scoping review performed, three assessment types were identified:

- 1) Assessment by usage statistics method
- 2) Assessment by survey method
- 3) Assessment by objective quantitative methods

Six articles described their IRCs service with the help of a usage statistics' analysis. While this method can certainly give information on the use of the service, it cannot offer insight regarding the impact of the service. The second method of assessment by utilizing survey data has the most conducted research, with eleven articles detailing how their institutions have surveyed users of their service. Using surveys to assess the service's impact on users provides insightful information, but is still a subjective method of assessment since users are rating their own performance or satisfaction, and is not a direct measure of impact. Only three studies have tried to assess individual consultations with objective quantitative methods of assessment. In the most recent research, Reinsfelder (2012) used citation analysis to evaluate the impact of individual consultation by assessing the quality of citations used by students on their draft paper, before the appointment, and on their final paper, after the appointment. Erickson & Warner (1998) used objective data to evaluate individual consultation by recording search patterns amongst OB-GYN residents when using the database MEDLINE. They measured and evaluated the search frequency, duration, recall and precision. Morris Donegan, Domas, & Deosdade, (1989) compared two instructional methods: group instruction sessions and "Term Paper Counselling" (TPC). They used a test with multiple choice questions that was distributed at the end of the individual or group sessions. These three studies have had mixed results. It is undeniable that objective, quantifiable research on the impact of IRCs on student's search techniques is needed. Furthermore, many studies included in this scoping review are not recent. We are interested in the current practice of IRCs in academic institutions. Are IRCs a common practice among academic libraries in Canada? What evaluation and assessment tools are they

using to obtain feedback, measure their impact and improve their consultation services? This study explores the individualized research consultation practices of Canadian academic libraries among the student population.

Methodology

A bilingual (French and English) web-based questionnaire was issued, with a generic definition of individualized research consultations provided. The questionnaire included general demographics and background information on individualized research consultations practices among Canadian academic librarians, followed by reflective questions on the assessment process of such practices, for a total of eighteen questions. The survey included both semi-structured and open-ended questions. The survey was anonymous and was managed with a password protected private account using FluidSurveys. Ethics approbation was obtained by the University of Ottawa Research Ethics Board. The questionnaire was sent to Canadian academic librarians via email, using professional librarian associations' listservs, and Twitter was used for dissemination as well. All questions were optional and participation was voluntary. Data collection took place between August and October 2014.

Results

All multiple choice questions were analysed using the software IBM SPSS Statistics 23. Descriptive statistics and cross tables were tabulated for the analysis. Open-ended questions were coded and analysed with the help of the software QDA Miner 4 Lite. The survey received one hundred eighty-four (184) complete responses (incomplete answers were removed). From these 184 responses, twenty-five respondents answered the survey in French. For fluidity purposes, the French and English responses were merged. With an unknown and very narrow target population (e.g. Canadian academic librarians providing individual consultations), the response rate of 184 can be deemed as positive. Participants were from all sizes of academic institutions: 40.8% were from large institutions, 21.7% from medium size institutions, and 37.5% from smaller institutions (Table 1). Participants also had very diverse areas of specialization. The three areas with the most representation were the arts and humanities (16.3%), the health sciences (21.2%), and the social sciences (19%). The "other" category was comprised of participants having multiple disciplines, no specific specialization, or their disciplines didn't match the categories listed (Table 2).

Table 1: Participants' Institution Size

Institution Size	Frequency	Percentage
Large (more than 24,000 full-time students)	75	40.8
Medium (between 12,000 and 24,000 full-time students)	40	21.7
Small (less than 12,000 full-time students)	69	37.5
Total	184	100,0

Table 2: Participants' Area of Specialization

Area of Specialization	Frequency	Percentage
Administration and Management	13	7,1
Arts and Humanities	30	16,3
Education	7	3,8
Health Sciences	39	21,2
Interdisciplinary (i.e. Data and Statistics, Scholarly Communications, etc.)	19	10,3
Law	8	4,3
Sciences and Engineering	14	7,6
Social Sciences	35	19,0
Other	18	9,8
Total	184	100,0

The main providers of IRCs were identified as librarians. Para-professionals and MLS students were additional providers (Table 3). Table 4 illustrates that IRCs are provided to undergraduate students (92.4%), graduate students (85.9%), and faculty members (91.8%) almost all in the same measure. The survey's participants could select more than one choice for this question, which is why the percentages don't add up to 100%. It also demonstrates that IRCs are provided to difference populations by the same providers.

Table 3: IRCs Providers

IRC's Providers	Frequency	Percentage observed
Librarians	184	100,0%
MLS Students	7	3,8%
Para-professionals (i.e.: support staff, reference technicians, library assistants)	38	20,7%
Other	6	3,3%

Table 4: Populations to which IRCs are provided to

IRC provided to	Frequency	Percentage observed
Undergraduate students	170	92,4%
Graduate students	158	85,9%
Researchers/Faculty members	169	91,8%
Other	45	24,5%

IRC's can vary in length. Participants indicated that an average appointment would take between 30-59 minutes, 68.5% of the time, not including preparation time (Table 5). Respondents provided comments and most described that the time allotted varied, and specifically, it depended if the patron was an undergraduate student or graduate student, and also what type of research was being carried out by the user. Participants also described that follow-up appointments were not frequent; the responses "No" and "Less than half the time" comprised of 85.3% of respondents' answers (Table 6). Participants commented that a follow-up with a patron does occur quite often, but most of the time, it is in the form of an email, and not necessarily as a second scheduled appointment.

Table 5: Appointment Length

Appointment's length	Frequency	Percentage
Less than 30 minutes	26	14,1
Between 30-59 minutes	126	68,5
60-89 minutes	31	16,8
More than 90 minutes	1	,5
Total	184	100,0

Table 6: Follow-up appointment(s)

Follow-up appointment(s)	Frequency	Percentage
No	49	26,6
Less than half the time	108	58,7
More than half the time	22	12,0
Virtually always	5	2,7
Total	184	100,0

Table 7 shows that very few IRCs providers don't prepare (only 5.4%) before an appointment with a user. More than half (62.5%) of respondents either prepare before an IRC "more than half the time" or "virtually always". For those who prepare, they spend on average either less than 30 minutes (46.1%), or between 30 to 60 minutes (45.4%) to prepare (Table 8). Different opinions were voiced within the comments for this question. Some participants mentioned that preparation length varies a lot depending on the type of research help needed, and is not always possible since the topic is not always known before the appointment.

Here are a few of the respondents' comments:

"When I have some details about the research question, I prefer to do some preliminary searching in preparation for the consultation."

"As time permits."

"It depends on the subject and the experience of research I have in that specific field."

Table 7: IRCs provider preparation before the appointment

Preparation before IRC	Frequency	Percentage
No	10	5,4
Less than half the time	59	32,1
More than half the time	48	26,1
Virtually always	67	36,4
Total	184	100,0

Table 8: Preparation Time

Preparation time	Frequency	Percentage
Less than 30 minutes	60	46.1
Between 30-60 minutes	59	45.4
More than 60 minutes	11	8.5
Total	130	100.0

We asked participants the following open-ended question: "How do you prepare?". One hundred and fifteen respondents provided an answer. Their comments can be categorized in these four themes:

1. Doing background research
2. Finding appropriate keywords
3. Identifying search tools
4. Doing preliminary searches

Table 9 shows that more than half of the participants have one appointment or less per week on average (57.7%), and a third (38.5%) have two to five appointments per week. Many respondents explained that the time of year plays a huge factor in the amount of appointments provided:

"More or less depending on the time of year - more October/November and February/March for undergrads and lots in the summer for grads and faculty."

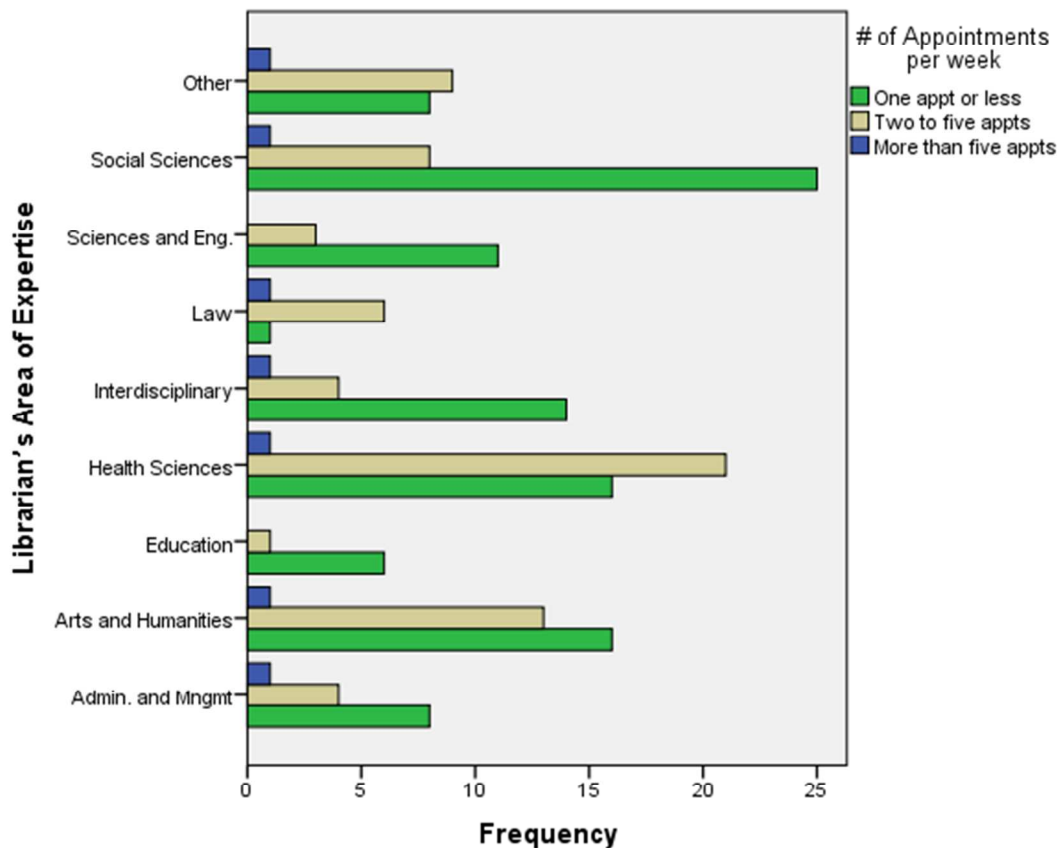
"Average doesn't work here because of the nature of academe. I do over 300 such appointments per academic year (2 semesters)."

Table 9: Appointment(s) per week

Appointment(s) per week	Frequency	Percentage
One appointment or less	105	57,7
Two to five appointments	70	38,5
More than five appointments	7	3,8
Total	182	100,0

In addition to the descriptive statistics completed, many cross tables were performed, but only a few variables had a significant difference worth reporting. Figure 1 demonstrates that health sciences, followed by arts and humanities, are the specialities where "two to five appointments" per week are the most common. Social sciences is the area where "one or less" appointments is most common.

Figure 1: Librarian’s Area of Expertise and quantity of appointments per Week



Most respondents (88.5%) stated that IRCs are “very useful for the users” (Table 10). Participants were extremely generous with their comments throughout the survey. This particular question holds eighty-one comments.

Here are some remarks that summarize the overall sentiment of respondents:

“These are the best of the best. You can focus on one person’s needs, and fully respond to that. Much more efficient and interactive than teaching to groups.”

“They usually send thank you emails, and don’t hesitate to contact me again if they have further questions.”

“Students who book a consult tend to be very anxious and frustrated and feel much better after spending some time with me.”

Table 10: Usefulness of IRCs

Usefulness of IRC	Frequency	Percentage
Not useful for the user	0	0
Somewhat useful for the user	21	11,5
Very useful for the user	162	88,5
Total	183	100,0

Table 11 lists different type of assessment methods used to evaluate the effectiveness of IRCs. Most participants (76%) stated that they used “informal comments from users” as their main assessment method. Around 25% of participants stated that they have no assessment methods in place at their institution, and 36.1% of participants use “usage statistics compilation and analysis”. The category “other” comprises of a few added means of assessment; i.e. storing thank you emails, return users and faculty feedback on the student’s progress.

Table 11: IRC’s Assessment Methods

IRC’s Assessment Methods	Frequency	Percentage observed
None	46	25,1%
Informal comments from users	139	76,0%
Usage statistics compilation and analysis	66	36,1%
Evaluation form given to the user at the end of the appointment	3	1,6%
Survey sent to users of the service	2	1,1%
Skills test given to the user to evaluate their information literacy skills	2	1,1%
Other	14	7,7%

Participants were asked to give their opinion on how IRCs can be assessed for impact. Most respondents (84.3%) favoured the option “by obtaining user’s satisfaction”. Around 37% of participants selected the response of “...obtaining librarian’s appreciation and feedback” as another assessment method, and also “In assessing user’s information literacy skills” (34.9%) (Table 12). The “other” category comprise of a few additional means of assessment identified by participants: analyzing resources cited in the student’s paper or project report; observing an increase of grant acceptances and paper acceptances (when dealing with graduate students and faculty).

Table 12: How to assess IRCs impact

How to assess IRC’s impact	Frequency	Percentage observed
By obtaining user’s satisfaction	145	84,3%
By obtaining librarian’s appreciation and feedback	64	37,2%
In assessing user’s information literacy skills	60	34,9%
By obtaining student’s grade to assess whether the individualized research consultation had an impact on the course or paper grade	42	24,4%
Other	40	23,3%

We asked participants the following question: “Please elaborate on what student’s information literacy skills (IL) you believe should be assessed?”. Many respondents (64.7%) identified what IL skills should be assessed, which are quite identical to the ACRL Information Literacy Competency Standards (ACRL Information Literacy Competency Standards Review Task Force 2014):

1. Understanding of keywords and/or subject headings
2. Ability to construct search strategies
3. Appropriate selection of databases/resources
4. Knowledge of Boolean operators

- 1 5. Ability to evaluate resources
- 2 6. Knowledge of a citation style, and of citation management software/tools
- 3 7. Copyright/plagiarism awareness
- 4 8. Understanding of primary vs secondary materials

7 Surprisingly, some participants didn't provide what element of an IRC should be assessed, but
8 rather provided comments on why we can't or shouldn't assess IL skills for IRCs. The main
9 themes were:

- 10 1. Testing IL skills would provoke anxiety to user (3.5%)
- 11 2. IRCs are not assessable by their nature (16.5%)
- 12 3. Why bother? Not useful to assess IL skills for IRCs (15.3%)

13 Here's a quote from a respondent that explains well why some people think IRCs are not
14 assessable by their nature:

15 *"I see individual consultations as personal tutoring sessions. They are not cookie cutter sessions.
16 There is not a pre-defined set of learning outcomes and performance indicators. I am not sure
17 how assessment fits in the equation."*

24 Discussion

25 In summary, the major findings of our survey regarding IRCs in Canadian academic libraries are
26 that they are one hour in length on average, their providers are mostly librarians who often
27 prepare in advance and sometimes, but not frequently, have follow-up appointments. IRCs are
28 provided to undergraduate and graduate students almost equally, and the majority of IRCs'
29 providers believe that they are very useful for the user. The health sciences, and the arts and
30 humanities seem to be the busiest providers of IRCs. This portrait of IRCs' practice is not
31 surprising; it reflects what we have seen at our institution.

32 It is also not surprising that there is a lack of assessment methods among Canadian academic
33 libraries. Most libraries have either no assessment in place for IRCs, or they rely heavily on
34 informal feedback from users, comments from faculty members and so on. A small portion of
35 libraries use usage statistics to assess their IRCs' service, but other means of assessment are
36 practically non-existent. Comments from participants confirm the perception that assessing IRCs
37 is impossible by its very nature (as they are usually tailored to the individual's needs), and could
38 even provoke anxiety in the user.

39 As discussed in the literature review, a handful of librarians have tried to evaluate IRCs' impact
40 using different objective quantitative methods.

41 Respondents even questioned why we would want to evaluate IRCs. Assessing IRC can help
42 provide feedback on the use of the service by asking simple direct questions. For example,
43 respondents mentioned providing some type of documentation to the users as a follow-up. The
44 following question could be asked to the user a few weeks after the appointment: "Have you
45 used the documentation provided?" By asking this question, IRC providers can assess if
46 providing this specific type of service is worthwhile and could help reshape the provision of
47 future IRCs. Assessing IRCs can also help with providing a strong argument as why this
48 specialized, but time-consuming service is needed, and perhaps can help built a strong case as to
49 not cut positions, or even requesting more positions when the current body of professionals
50 cannot suffice the demand.

Conclusion

There are a few limitations to this study. Firstly, in order to enter the survey, participants had to answer a qualifying question: "Do you provide individualized research consultations by individual appointment to students or researchers?". This information was stated in the consent form as well, nonetheless, thirteen participants answered "no" to this question, which terminated the survey. Informal comments from Canadian colleagues stated that not all institutions provide IRCs with a formal appointment; certain institutions might have some sort of a drop-in centre, which indicates that this specific component of the qualifying question is a limitation to the study. Furthermore, the study's population is unknown, as we did not know the exact number of librarians or library staff providing IRCs by appointment in academic Canadian institution. Our response rate is reasonably good, but it is impossible to know if our sample is representative of the population. Also, it needs to be acknowledged that the study is exploratory in nature as this is the first study solely dedicated at examining academic librarians' individualized research consultations practices. Further research is needed.

Did this study succeeded in answering its research questions? Taking into account the study's limitations, we can say yes, IRCs are a common practice among academic libraries in Canada. We also asked what assessment tools IRC providers are using to obtain feedback, measure impact and improve consultation services. We can conclude that assessment methods are sparse, and most IRC providers rely on informal comments from users.

In-person tailored assistance is still a service students and researchers are demanding and expecting. Assessing the impact of IRCs should be part of every librarian's routine providing this specific type of service in order to keep its practice current to the user's needs. As for future research, we have developed a pre-test and post-test to assess the impact of IRC on students' search techniques, and have done a first round of data collection. We are planning on gathering more data, and to hopefully disseminate our results shortly.

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Appendix 1

This table is an excerpt from our scoping review manuscript organized by included papers and assessment type.

Assessment types and included papers

Assessment Types:	Usage statistics method	Survey method	Objective quantitative method
Included papers:	Attebury, Sprague, & Young (2009)	Auster (1994)	Erickson & Warner (1998)
	Becker (1993)	Bean (1995)	Morris Donegan, Domas, & Deosdade (1989)
	Hoskisson & Wentz (2001)	Cardwell, Furlong, & O'Keeffe (2001)	Reinsfelder (2012)
	Lee (2004)	Coniglio (1984)	
	Meyer, Forbes, & Bowers, (2010)	Debreczeny (1985)	
	Yi (2003)	Gale & Evans (2007)	
		Gratch & York (1991)	
		Imamoto (2006)	
		Magi & Mardeusz (2013)	
		Rothstein (1990)	
	Schobert (1982)		
Total:	6	11	3