Information Needs and Behaviours of Theology Students at the International Baptist Theological Seminary

by Katharina Penner

ABSTRACT: The study analyses information needs and behaviours of master's and doctoral theology students currently studying at the International Baptist Theological Seminary (IBTS) in Prague, Czech Republic. It aims to extend understanding of the information behaviour of theologians working as distance learners in a cross-cultural setting. The study follows a quantitative research approach with a survey design and attempts to replicate in a modified way studies by Gorman (1990) and Stieg Dalton and Charnigo (2004).

The findings suggest that theology students at IBTS use many and varied types of materials in their interdisciplinary studies while giving clear preference to books, periodicals, and dissertations. Most of the participants have, partly successfully, embraced information technology as a tool and use it extensively. To satisfy their research needs they employ a variety of methods to find relevant information and fall back on "typical" humanists' research behaviours when "usual" channels do not work: engage their networks, expand their personal library, and browse.

While the humanist profile is evident throughout the diverse group, there are also notable differences. Theologians increasingly work interdisciplinary and integrate approaches considered typical for other disciplines. Partly differences are caused by the fact that the group under consideration are students who still experiment with research approaches. Many differences are caused by technological developments and contextual aspects.

INTRODUCTION

Research on how various groups go about finding necessary and relevant information has been quite popular throughout the last decades.[1] Although there is a wealth of materials available on human information behaviour in general and on scholars in different disciplines, theologians seem to have received less attention. This article presents the results of a study of the information behaviour of a small group of theology students working in a cross-cultural setting. By analysing information needs and behaviours of master's and doctoral theology students currently studying at the International Baptist Theological Seminary (IBTS) in Prague, Czech Republic, it is hoped that a better understanding of their needs, an appreciation of the methods used to discover information, and an understanding of problems encountered while obtaining information may help the library serve the students more effectively. The aim of the research is twofold: 1) to gain a better understanding of actions and attitudes in the research processes of theologians-to-be and 2) to provide strategic guidance for the development of information services for this group of research students.

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[1] Admitting the difficulties of establishing hard data on the number of information-seeking publications, Case suggests that there is an "escalating growth rate: 30 items per year during the early 1970s, 40 during the early 1980s, 50 by the late 1980s, 100 by 1990, and 120 items per year by 2005." He continues: "It is likely that over 10,000 publications have been published on information needs, uses, seeking, and other aspects of information behaviour, even in the strictest senses of those terms." Donald O. Case, *Looking for Information: A Survey of Research on Information Seeking, Needs, and Behavior*. 2nd ed. (Amsterdam, Boston: Elsevier/Academic Press, 2007), 242, 243.

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Target group

The study focuses on Central and Eastern European (CEE) postgraduate theology students enrolled for doctoral (twenty-six persons) and master's (seventeen persons) level studies at dissertation stage.[2] A second smaller group is comprised of nationals of so-called western countries (U.K., U.S.A., Canada) who are also studying part-time non-residentially at IBTS in the same doctoral (fourteen persons) or master's degree (six persons) programs. They have the same supervisors but usually come from a different educational system and are located in countries with more accessibility to information. The second group functions as a control group.

Students mainly study part-time, non-residentially, and visit the campus library about once per year when they come to take the next module (master's) or attend the annual two-week Research Seminar with their supervisors and co-students (doctoral students). Their thesis and dissertation topics are usually related to theological issues in their own context, which means that they use much local information (in their own language and available close to their homes) in addition to resources offered by the IBTS library. Theses and dissertations are written in English and the students' English skills range from adequate to excellent. Often they have reading skills in one or more additional languages. As research postgraduates they are therefore somewhat unusual in the distance-learning approach required and in the cross-cultural issues with which they must deal while doing their research.

The group is diverse; however, in aspects that are analysed in the current study, the participants are quite homogenous. Some of the students' common characteristics are their shared Slavic roots and their maturation under a communist regime whose influence is still felt in many areas of society, including education, leadership styles, initiative and responsibility taking, conservatism in their outlook on life, and theological orientation. Other similarities include that the students:

- are enrolled in the same programme;
- deal with supervisors with similar approaches, expectations, and institutional culture;
- share a similar cultural and educational background;
- share similar intellectual, spiritual, and societal standing;
- encounter difficulties as non-resident students;
- work in their home countries in an information-poor environment.

Literature Review

The literature review previously published in *Theological Librarianship* revealed that little research has been done on the research behaviours specifically of theologians.[3] A wealth of materials is available on humanists' research behaviour and on human information behaviour that provide helpful guidance for research design and a sounding board for result comparisons. The working hypothesis of the present study is that theologians are similar to

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[2] Master's students before dissertation stage have to follow certain essay questions in their research activities (imposed queries), which results in different information behaviour. This is the reason for not including Master's students before dissertation stage in this research.

[3] Katharina Penner, "Information Behaviour(s) of Theologians: A Literature Review," *Theological Librarianship* 2, no. 1 (2009), 67-82, http://journal.atla.com/ojs/index.php/theolib/article/view/79/236.

humanists in their preference for sources of information, in their methods of information discovery, and in their attitudes toward electronic sources.

Methodology

The study attempts to replicate in a modified way studies by Gorman[4] and Stieg Dalton and Charnigo[5] and, therefore, follows a quantitative research approach with a self-completion questionnaire employing both closed and open questions. The questionnaire contains three main sections other than the initial section for personal information: questions relating to sources of information used including both print and electronic sources, questions relating to the use of electronic sources only, and questions relating to library services. The questions either required participants to select one or more answers from a list of answers provided, to weigh information sources and activities and list them in order of importance, or to provide short factual or reflective answers (the full questionnaire appears at the end of this article). Some closed questions include the option "other" to encourage participants to expand the listing of possible resources or methods, but this opportunity was not used often.

PART 1: RESULTS

The presentation of findings will follow the questionnaire's main subdivisions. First, a profile of participants is sketched.

1.1 Profile of respondents

Sixty-three questionnaires were sent as e-mail attachments. Forty-eight were returned for a response rate of 76.2%. More master's than doctoral students and more females than males responded to the questionnaire. Those actively involved with the library, who were interested in and appreciative of its resources, were the first to respond and so added a bias toward a more positive evaluation.

Of the forty-eight respondents, nineteen were finishing their master's theses and twenty-nine were involved in doctoral studies (Table 1). The gender distribution of the thirteen master's and doctoral students who come from western countries (U.S.A., U.K., Canada) was almost equal: seven males and six females. In the larger group of thirty-five respondents from CEE[6], 82.8% were males. Participants varied in age from their twenties to fifties, with the mode being 30-39.

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[4] Gary E. Gorman, "Patterns of Information Seeking and Library Use by Theologians in Seven Adelaide Theological Colleges," *Australian Academic & Research Libraries* 21, no. 3 (2003), 137-156.

[5] Margaret Stieg Dalton and Laurie Charnigo, "Historians and Their Information Sources," *College & Research Libraries* 65, no. 3 (2004), 400-425.

[6] Represented countries include Albania (1), Belarus (1), Bulgaria (4), Czech Republic (4), Estonia (1), Hungary (1), Latvia (2), Lithuania (3), Moldova (2), Poland (1), Romania (2), Russia (7), Serbia (1), and Ukraine (5).

	Master's	Doctoral	Male	Female	East	West	Total:
Baptist/Anabaptist Studies	1	9	7	3	6	4	10
Biblical Studies	8	4	9	3	9	3	12
Applied Theology	7	15	16	6	16	6	22
Contextual Missiology	3	1	4		4		4
	19	29	36	12	35	13	48

Table 1: Demographic profile of participants
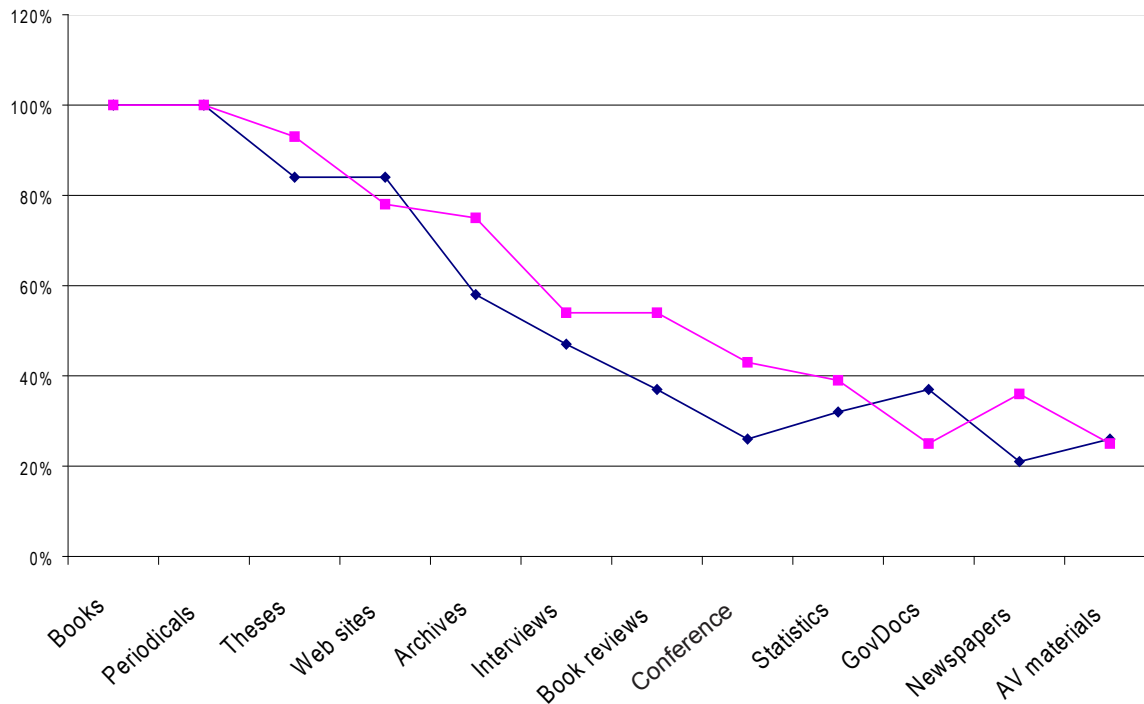
Figure 1: Variation in sources: East vs. West
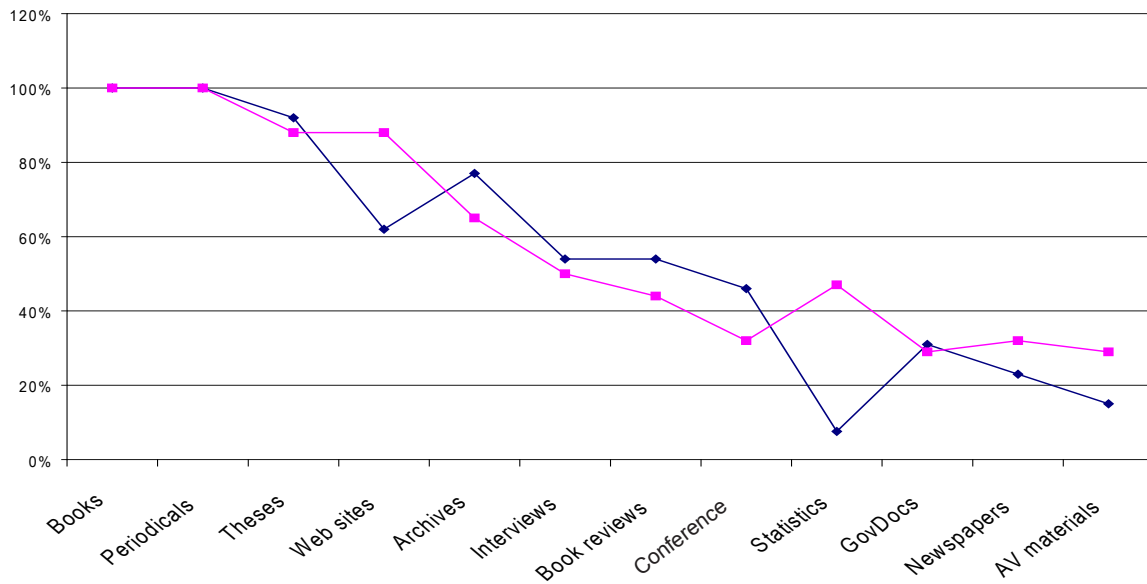
1.2 Sources of information[7]

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7   This section relates to Section 1 Sources of Information in the questionnaire.

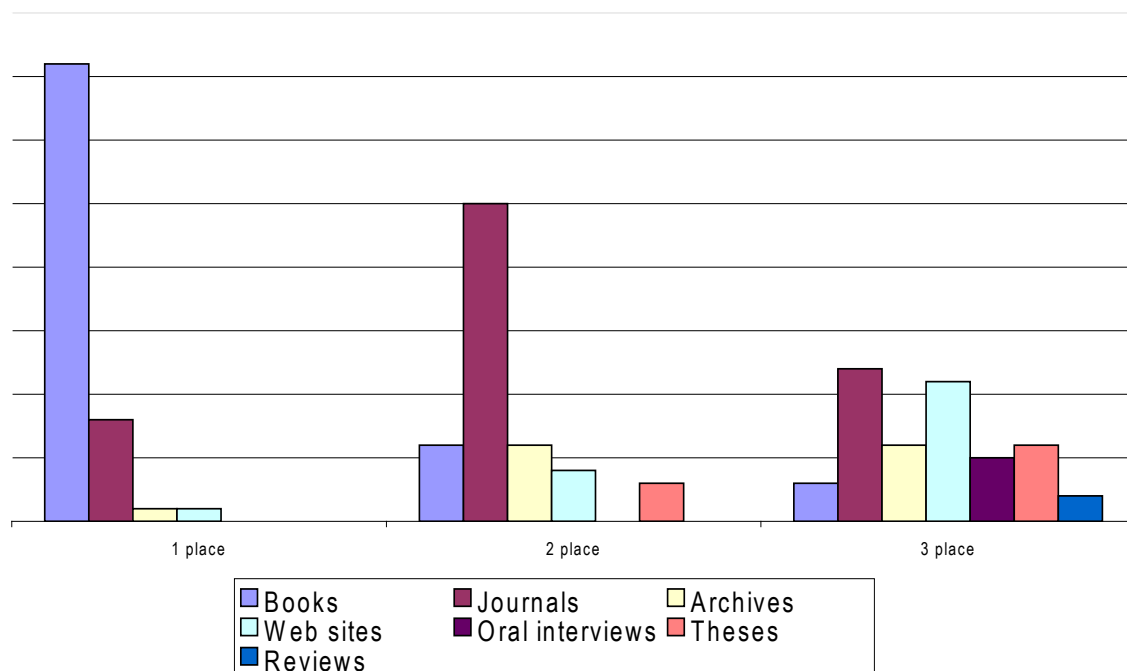## Figure 2: Variation in sources: Master's vs. Research

As in previous studies, standard sources in theology and humanities, such as books and journal articles, received the highest appreciation from respondents, independently of study programme and origin (Figures 1, 2). Theses and dissertations ranked third followed, surprisingly, by websites. Students from CEE countries (light pink type) scored websites at 88%. Manuscripts and archival documents continued to be important primary sources as are oral interviews and, for CEE students, statistical sources.

Usually there was no substantial difference between master's (dark blue type) and doctoral (light pink type) students in their use of sources, except that doctoral students used more sources (see Figure 2).[8] Still, several types of materials seemed to be more important for doctoral students: book reviews, conference proceedings, archival documents, statistical sources, and newspapers. When asked to rank three preferred material types in the order of importance, books were ranked first, journals second, and a combination of journals, websites, theses, archives, and oral interviews were third (Figure 3).[9]

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[8] As Gorman, "Patterns of Information Seeking," 146 notes, those pursuing higher degrees are usually more demanding of library sources and services. This has been reflected several times in the present study, with doctoral students using a broader spectrum of sources and information discovery methods, including discussions with librarians, than master's students.

[9] More variation already becomes obvious here: journals were chosen second by 57% of the respondents, books and archives by 14%, websites by 9% and dissertations by 7%.

Figure 3: Preferred sources

Legend:
- Books
- Journals
- Archives
- Web sites
- Oral interviews
- Theses
- Reviews

(x-axis: 1 place, 2 place, 3 place)

Most respondents (74%) did not answer the open question that asked respondents to list additional helpful materials. The small number that did respond mentioned personal experience, blogs, e-zines, surveys, and primary materials such as the Bible, hymnals, sermons, and prayers

The theological/denominational orientation of sources does not seem to be of great importance to participants (Figure 4). This is especially true for doctoral students (dark violet type), who are less likely to consider denominational or theological conformity as important. They are open to use any source as long as it is academic, relevant to their topic, and accessible.[10]

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[10] The question about the importance of theological orientation of sources was triggered by Wick's findings that his pastoral respondents move between a closed and open approach to information seeking, depending on their role and work world. He suggests that future researchers analyse whether "academics seek information largely within their own discipline world or whether they are more 'open' and willing to go beyond those worlds". D. A. Wicks, "The Information-seeking Behavior of Pastoral Clergy: A Study of the Interaction

Figure 4: Theological orientation of sources
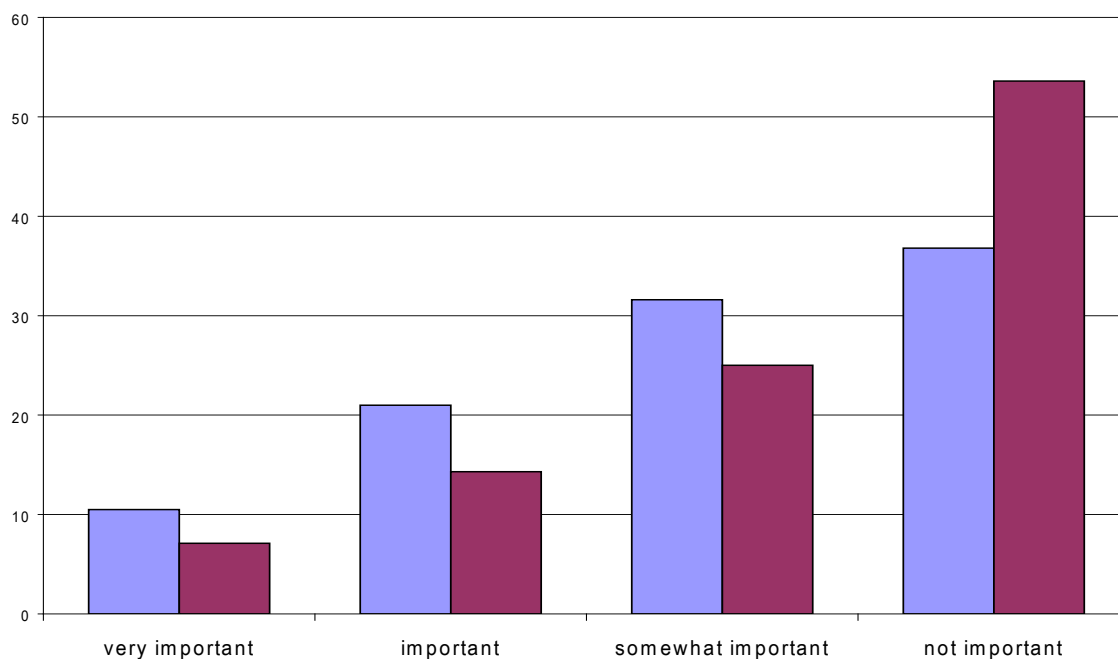
While involved in theology studies most participants believed they need to consult sources that address areas other than theology. In fact, 42.5% believed that between half or three-quarters of their materials should come from other disciplines. Around half (51%) thought that 25% of their materials needed to come from other disciplines. There was clearly a difference between master's and doctoral students in these attitudes: only three master's students insisted that all of their materials be directly related to theology while none of the doctoral students relied only on theological materials.[11]

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of Their Work Worlds and Work Roles," *Library and Information Science Research* 21, no. 2 (1999), 221. From the current survey it seems that theologians are definitely forced to go beyond their denominational and theological worlds and to engage materials presenting differing points of view, and many do. On the other hand, the context of the present study's respondents is still quite conservative and shame-oriented so when doing denominational research they will be careful as to sources they choose and especially as to what conclusions they draw. Nevertheless, cf. a quote by a CEE participant who is involved in denominational research: "If these sources will share only my theological position or denominational view then I will not be able to see my position in a wider Christian context."

[11] A chi-square test shows an association between use of materials from various disciplines and the course of study: When types of resources are divided into '75% or more theology materials' and 'less than 75% theology materials' and master's and doctoral students are compared, the test results come to following: chi=5.09 with Yates correction, number of degrees of freedom 1, p=0.02. This indicates an association between resource use and course of study as indicated in the text.

Participants from CEE countries have reading knowledge of at least 2-4 languages while representatives of western countries usually know one language well (English) and have some reading ability in French, German or Spanish. One respondent in Biblical Studies from the USA reads eight languages and one CEE respondent speaks ten. CEE respondents in this study know their native language, possibly the language of a neighbouring state, and conduct their current education in English as a third or fourth language. Western students seem more relaxed about ignoring a source in a foreign language (30% chose this option). CEE students sometimes also choose this option but always in combination with other possibilities, such as finding a translation. While an overwhelming majority of 80% try to find a translation, only 15.5% trust computer translation software and 35.5 % try to find an abstract/summary.

1.3 Electronic sources[12]

	Average (%)	Master's (%)	Doctoral (%)	CEE (%)	West (%)
IBTS online catalogue[13]	89	74	97	88	92
ATLASerials	72	68	75	76	69
Academic Search Complete	62	31	71	56	77
ProQuest Religion[14]	49	42	54	50	46
Wales Online Library	30	21	29	26	31
EZB (UoR)	28	37	21	32	15
Open access journals	34	26	39	41	15
ATLA (Index)	55	37	68	71	15
Index Theologicus	8	-	14	9	8
Cambridge e-books	17	16	18	18	15
Gutenberg Project	13	11	14	9	23
UMI dissertations	13	-	21	9	23
TREN (dissertations)	8	-	14	9	8

Table 2: Electronic sources

1.3.1 Use of sources
The positive ranking of websites in the responses in the first section of the questionnaire came as no surprise as 70% of respondents indicated in Question 1.7 the same satisfaction with both print and electronic formats. Nevertheless, some felt more comfortable with print rather than electronic sources, and this seems not to be age or context related. Of the ten respondents who preferred print, three were 20-29 years of age, three were 50-59, and four were 30-39. Four males preferred only electronic sources, and only two (both women) felt comfortable with microforms.

[12] This section relates to Section 2 Electronic Sources of the questionnaire.

[13] The table includes databases of electronic resources that are listed on the IBTS Library website; IBTS subscribes to some and others are freely available on the internet.

[14] ProQuest Religion at that point was accessible only on campus and so could be used only when students were actually in Prague. This may explain the lower results for this database.

Table 2 shows most respondents used online catalogues, though master's less than doctoral students. They consulted the catalogue of the institution where they study but also listed other internet-accessible library catalogues.[15] They used full-text electronic journal databases, with master's and CEE students sometimes scoring lower. About a third sought out freely accessible but less user-friendly open-access electronic journal databases; CEE students clearly did so more often than western students. Relying on resources offered by IBTS, they also sought out other full-text databases. Index-only databases were not as attractive; there was a discrepancy between a moderate use of the *ATLA RDB* (average 55%) and an almost complete neglect of *Index Theologicus* (average 8%). The limited use of *Index Theologicus* was mostly by doctoral students from CEE countries.

Furthermore, it seems that while full-text electronic journals were regarded as "standard" resources, e-book use still fell far behind. Dissertation databases (which offer no full text or abstracts) are less attractive. Only 15% of respondents frequently used digitized primary sources, while the majority (about 60%) sought them out rarely or never and 25% "sometimes." Still, 62% emphasised that electronic sources have been "very helpful" in information seeking, and 32% believed they were "sometimes helpful."[16]

Figure 5: Perceived advantages of databases
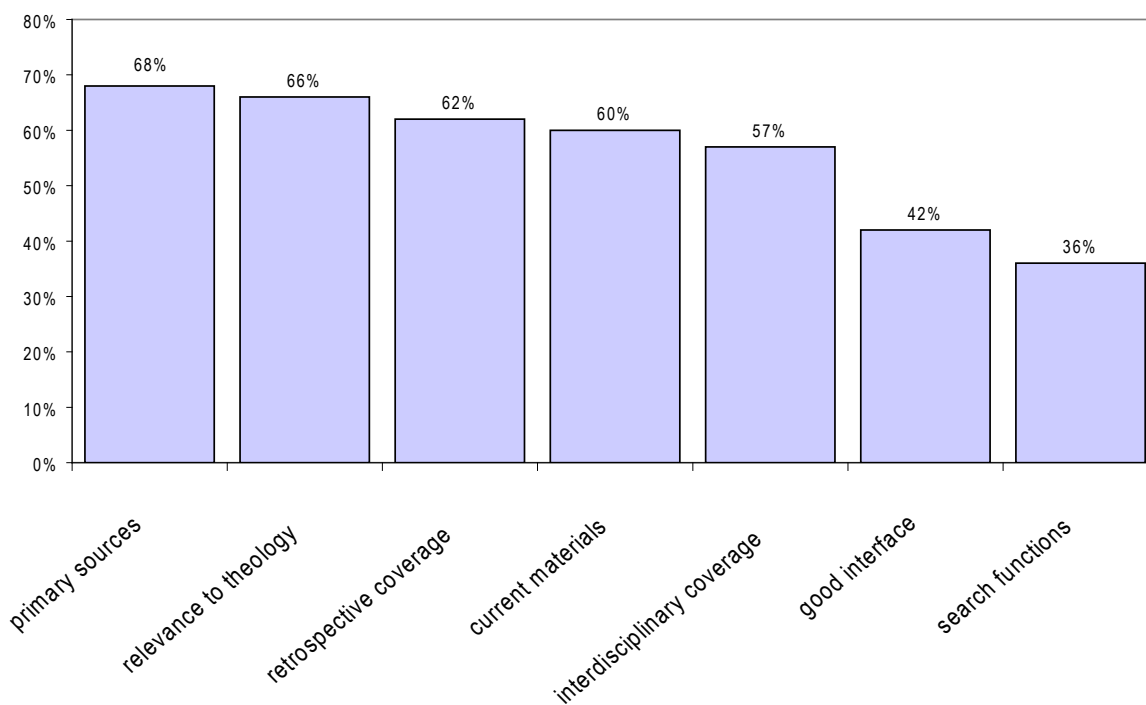
1.3.2 Advantages and disadvantages in databases

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[15] In answering question 2.1 of the questionnaire, respondents indicated the use of "many" online catalogues other than that of IBTS and the difficulty of listing them all.

[16] The question (2.9 on the questionnaire) was positioned at the end of the section on Electronic sources and in this way related to all kinds of electronic sources (full-text databases, index and dissertation databases, digitized primary sources, websites, devices such as Google Books or Amazon's 'Search inside' that allows one to see bits and pieces of information) previously mentioned in that section of the questionnaire.

In databases, respondents most appreciated the inclusion of primary sources (68%, see Figure 5).[17] Relevant theology materials were very important (66%) but also, with slight variations, retrospective coverage (62%), currency of materials (60%), and broad interdisciplinary coverage (57%). The question of good interfaces and varied search functions seemed less relevant and important (42% and 36%, respectively),[18] but should not be neglected by database designers because when describing problems with database searching, respondents mentioned frustration with user-unfriendly interfaces, difficulties with limiting search results, and searches that are too cumbersome. Other complaints related to database scope, content, and indexing.

The problems described above were cited by only 25% of the respondents because so few responded to the open question 2.7 of the questionnaire: 85% of western and 48% of CEE students left the question unanswered. Several CEE students explicitly stated that they "have no problems." In the responses, no variations were detected between students whose first language is English and those who work with English as a second or third language. A comment that indexing terminology is "difficult/unfamiliar" came from a U.K. student.

	Male, CEE	Male, West	Female, West	Female, CEE
Total	29	7	6	5
Taught myself	21	5	6	5
Learned from teachers/students	12	1	2	0
Learned from a librarian	19	3	2	4
Class or workshop	2	0	0	1
Online tutorials	0	0	2	0
Learned from my children	1	1	0	0
Would like more instruction	4 (14%)	2 (29%)	4 (66%)	2 (40%)

Table 3: How have you learned to use electronic sources?

1.3.3 Usage skills

Both similarities and significant differences could be observed in how participants learned to use electronic sources. They were primarily self taught with strong input from teachers, fellow students, and librarians, especially for males from CEE countries. Outside resources that require additional initiative, effort, and time, such as IT classes, workshops, and online tutorials, were underrepresented (only 2-3 out of 48 use them), in spite of available opportunities. Only two males (50-59 age group) admitted that they learned from their children.

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[17] While by "primary sources" I meant what the word implies—primary, as opposed to secondary, sources —I wonder, due to the high rating that this line received, whether possibly respondents understood it as "full text." If the study had been interview-based I would have asked for clarification; in a questionnaire I could not, so I decided to leave the figures as they are.

[18] There was no significant difference between the genders: interfaces seemed important to 38.8% of men and 54.5% of women and search functions to 33.3% of men and 45% of women. The higher ranges for women can also be caused by the low number of women who participated.

One quarter (25.5%) of the respondents stated they would like more instruction in electronic resources use; this attitude is strikingly different in the various groups. Males (30 of 36) believed that their search skills were satisfactory and they needed no additional help. This was more true of males from CEE countries. Women were more open to instruction, but, again, those brought up in CEE countries believed they could manage this challenge by themselves (Table 3).

Figure 6: Methods of discovery: Master's vs. Research
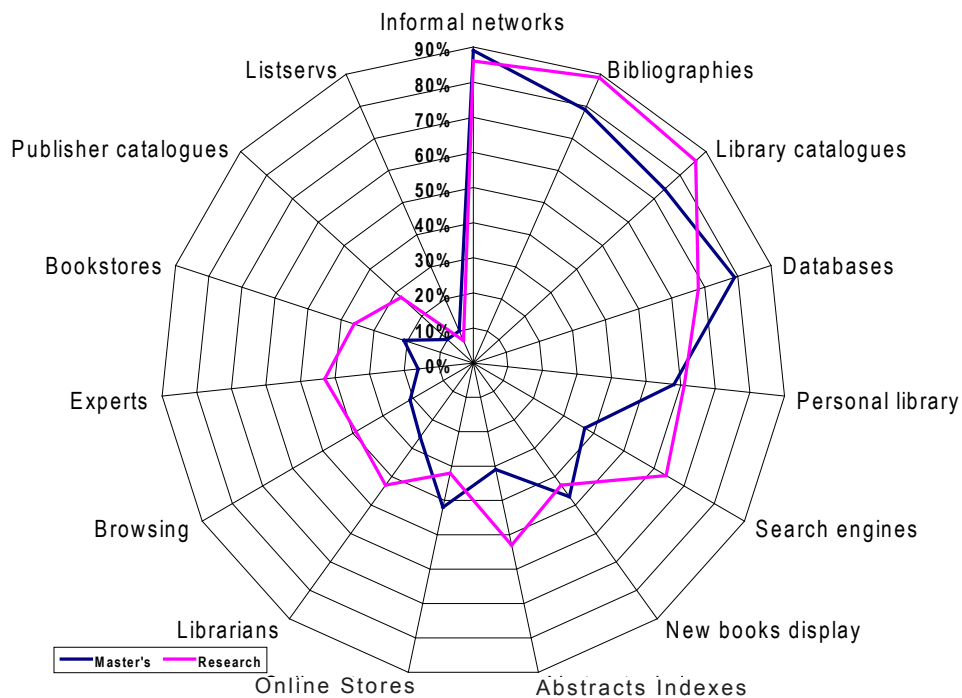
When they receive too many hits (see question 2.5), respondents either preferred to select the most respected authors or sources in the field (57%), think of new search terminology (55%), or use limiters (51%). Currency of materials (often marked together with choosing results from the most respected authors and sources) seemed important to 45% of the participants. Over a third (34%) did not want to miss any valuable information and review all results. Only 15% and 13%, respectively, are discouraged by too many hits to the extent that they start over again or look for a different database. The need to start over often seemed unavoidable to 83% of the respondents when the search yields too few results. They then check the indexing terminology of the database or look for another database (both options received 47%). Thirteen percent in this case also decide to approach a librarian (only 9% believe this is necessary when there are too many results).

1.4 Methods for information discovery[19]

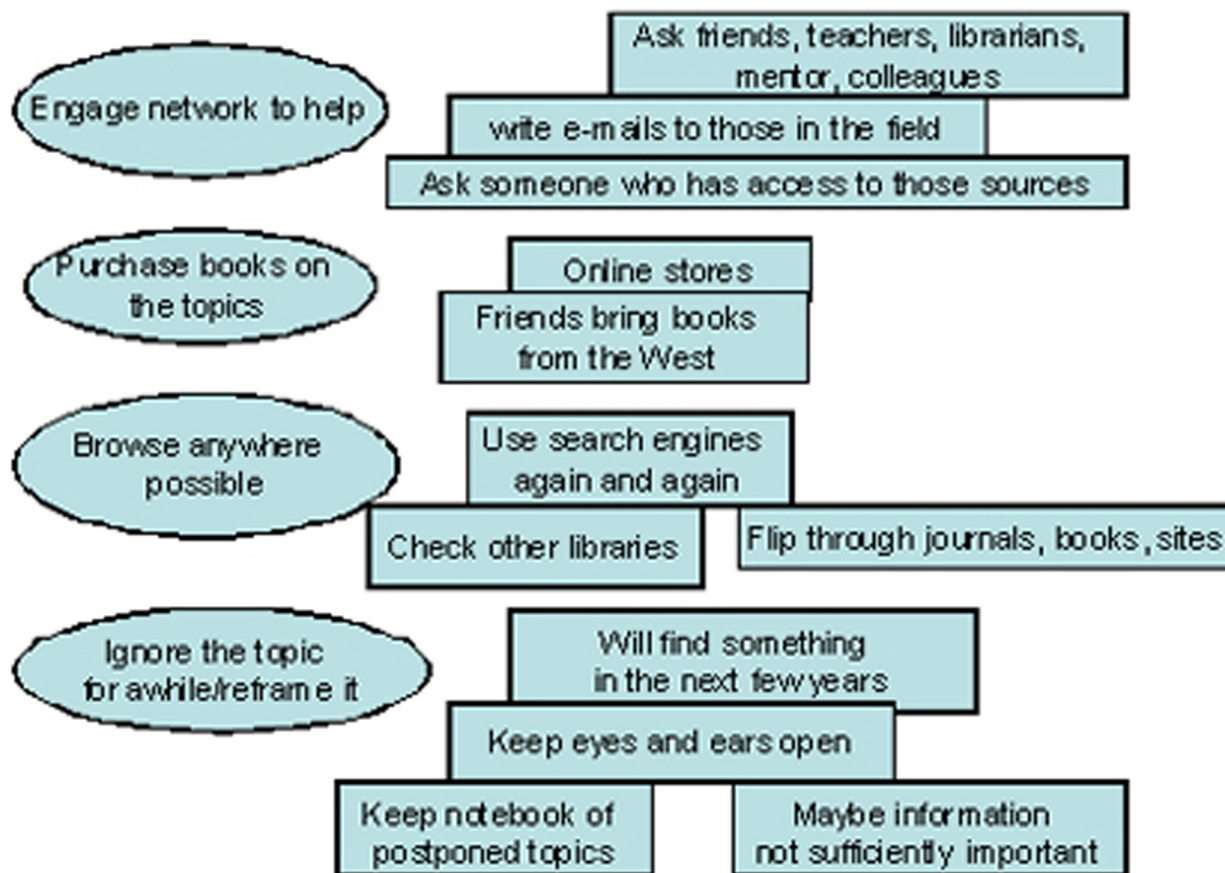**Figure 7: Methods of discovery: East vs. West**
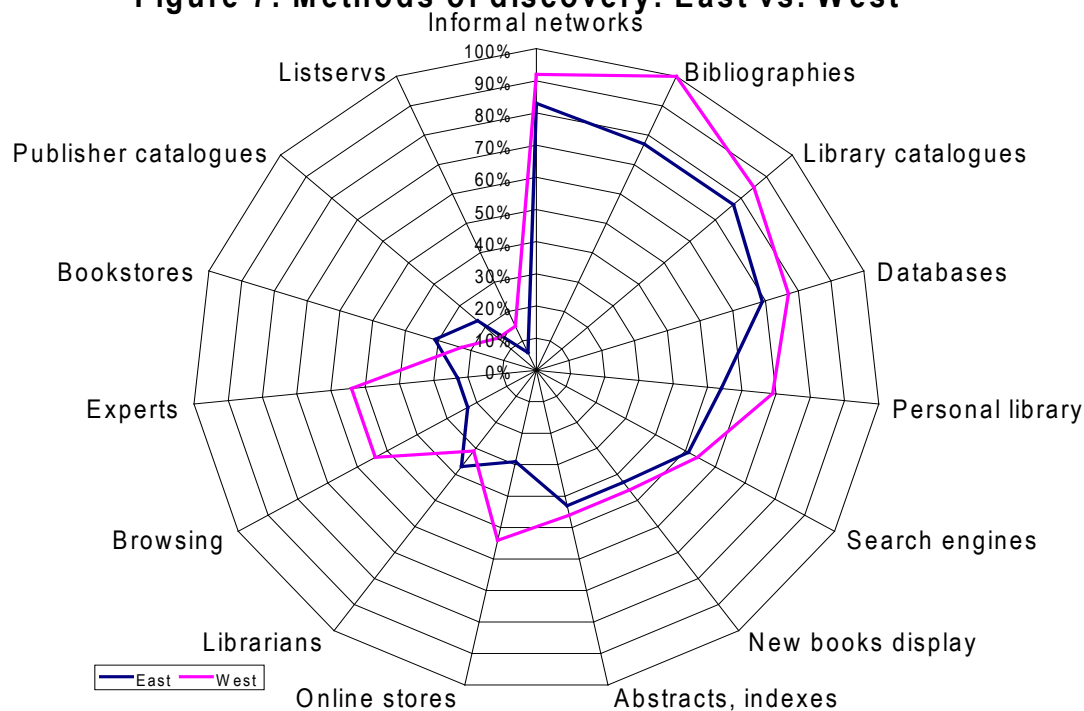
The great variety of information needed for successful interdisciplinary research poses specific challenges, and students employ a great variety of methods finding necessary information. The four top methods of information discovery were conversations with teachers and fellow students, bibliographies (reference chaining), library catalogue, and database searches. About 60% of the respondents indicated a reliance on their personal library and search engines to seek relevant information. All fifteen listed possibilities seem sufficiently relevant with the exception of listservs, forums, and blogs, whose use was indicated by only four persons. When asked to list additional methods of information discovery, 76% did not answer; answers given included Google Book Search, interviews, search of historical society archives, and attendance at seminars and conferences.

There were significant variations between doctoral and master's students' habits with respect to methods of discovering information. Doctoral students ranked higher the consultation of experts and librarians, they more often use search engines, abstracts and indexes, and publisher catalogues, and they more often engage in browsing (Figure 6). Master's students, on the other hand, indicated a preference for database searches. In comparison with CEE students (Figure 7), western students seem to have more access to bibliographies, experts at other institutions, possibilities to physically browse libraries, and build their personal library via online stores.

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[19] This section relates to Section 3 of the questionnaire: Methods of discovering relevant information.

Figure 8: If all else fails, try...

Engage network to help
- Ask friends, teachers, librarians, mentor, colleagues
- write e-mails to those in the field
- Ask someone who has access to those sources

Purchase books on the topics
- Online stores
- Friends bring books from the West

Browse anywhere possible
- Use search engines again and again
- Check other libraries
- Flip through journals, books, sites

Ignore the topic for a while/reframe it
- Will find something in the next few years
- Keep eyes and ears open
- Keep notebook of postponed topics
- Maybe information not sufficiently important

Methods of gathering information when all the "usual" possibilities have been exhausted can be grouped into four categories (see Figure 8). Interestingly, many responded to this open question (only five did not), probably because the necessity of going beyond the "usual" methods often occurs. Again the highest priority was given to contacting people (38% of western and 51% of CEE students) orally, by e-mail, or on internet forums. Other options included expanding one's personal library, browsing in places that potentially produce a lead, or simply putting the issue on the back burner while "keeping eyes and ears open." Not many indicated the use of alerting or notification services for recently published information: while 47% did not respond, four explicitly said that they do not use such services. Of the remainder, 8% use RSS feeds, 21% Table-of-Contents services, and 17% publishers' alerts.

Serendipity plays an important role in the information discovery of the respondents (Question 2.6): 32% considered it a frequent and 62% an occasional phenomenon. Accidental discovery usually happens when reading books or reviews (78%) and browsing stacks in a library (64%). Also important were library catalogue searches (57%),

internet browsing (55%), database searches (53%), and discussions with scholars (51%). Doctoral students scored higher on all of these activities, especially on browsing (75%), database searches (64%), discussions (61%), and library catalogue searches (64%).

Few are aware of or admit information avoidance (Question 2.8): 45% provided no response and 25% cannot recall any such situation. Those who responded emphasised that usually there is too little rather than too much information.

1.5 Library services

Circulation	43	91%
Assistance in finding relevant materials	31	66%
Assistance with equipment	29	62%
Assistance in using databases	21	45%
ILL	21	45%
Assistance in locating materials	20	42%
Document delivery	15	32%
Discuss research with librarian	14	30%
Order books through library	14	30%
Search skills training	9	19%

Table 4: Use of library services

It comes as no surprise that the most frequently indicated library service used was the circulation of materials (Question 4.1, Table 4). Two-thirds of the respondents valued assistance in finding relevant materials, with slightly fewer valuing assistance with using equipment such as copy machines, scanners, etc. Less than one-half request

assistance with databases or use interlibrary loan service. Although the students study at a distance most of the time, only one-third draw on the possibility of receiving a document (scanned article or chapter) sent to them.

When asked how the library could better assist in information seeking and research (Question 4.3), 36% did not answer while 23% stated that they were quite happy with library services. The nineteen remaining respondents offered a number of suggestions including the following services:

- provide more electronic remotely accessible content
- mail books to users
- provide clearer, more timely information on library services and available databases
- add short book reviews to books displayed on the New Books webpage
- offer Tables of Contents of received journals
- view in the library catalogue books as they are arranged on the shelf (substitute for browsing)
- ability to search all databases under one interface
- provide bibliographies on research topic
- more specific and, preferably, web-based search training.

One respondent, warning against an over reliance on technology, emphasised the importance of maintaining the library as an open and hospitable physical space.

1.6 Summary of findings

From the questionnaire findings it seems that theology students at IBTS use many and varied types of materials in their interdisciplinary studies while giving clear preference to books, periodicals, and theses. Most of the participants are comfortable with print as well as electronic formats, and one observes a relatively extensive use of the latter, marked by high scores for websites, online catalogues, and databases of electronic journals (but not yet e-books). To satisfy their research needs they employ a variety of methods to find relevant information and fall back on "typical" humanists' research behaviours when "usual" channels do not work: engage their networks, expand their personal library, and browse. Their suggestions for library services improvements emphasise accessibility of relevant content, possibilities for "remote" browsing, and search skills training.

Part 2: Discussion

From the extensive literature produced on information-seeking behaviours of humanists, several themes seem to recur that are also reflected in the current study. These concern 1) sources preferred by humanists, 2) attitudes toward electronic resources and difficulties associated with database use, and 3) the multitude of methods and approaches used in finding and processing helpful information. Table 5 summarizes both similarities and differences between humanists' behaviour and the information behaviours of the group of theological students in the current study.

Themes recurring for humanists/ theologians	Similarities	Differences
Sources	- Importance of primary sources - Text and print bound - Importance of personal collections - Avoidance of indexes	- Sources in greater variety of formats, e.g., oral rather than written - Increased use of materials from other disciplines - Increased importance of personal collection for CEE students
Attitudes toward electronic resources	- Cautious and differentiated - Only if perceived time savings and if contains relevant content - Database design not humanist-friendly - Similar problems in use	- IT is common tool for research - Increased use of websites and search engines - Database searches still more attractive than search engines - Low use of e-books and indexes
Multiple research approaches and discovery methods	- Primary search method is chaining (citation tracking) - Browsing more than searching - Solitary research, but heavy reliance on exchange of ideas with teachers and colleagues	- Informal networks important at any research stage - Lower emphasis on browsing

Table 5: Summary of findings

2.1 Sources of information

Listings of preferred types of materials (see Figure 3) demonstrate that participating theology students are quite book and print bound. In this, they follow the profile of humanists who focus on texts and their interpretations and who, even if using electronic materials, print them out for reading.[20] However, while respondents to the current study list journals as their second favourite type of material (see Figs. 1 and 2), the heavy use of electronic journal databases (see Table 2) suggests that they are thinking of "journals" in both electronic and print formats. Students embrace new technologies because these provide accessibility.

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[20] Christine Wenderoth, "Research Behaviors of Theological Educators and Students: The Known and the Unknown," *American Theological Library Association Summary of Proceedings* 61 (2007), 180. British English academics also continue to make higher use of printed materials, mainly from their personal library; see Donna Gardiner et al., "A Snapshot of Information Use Patterns of Academics in British universities," *Online Information Review* 30, no. 4 (2006), 347-8.

Stieg Dalton and Charnigo had already noticed an increase in dissertation use.[21] In the current study, theses and dissertations ranked as high as third because of the kind of academic work in which these respondents are involved. Barrett's participants also commented on how "tremendously useful" it was to read an accomplished scholar's product.[22] Similarly to the behaviour of historians, this study shows a lesser degree of reliance on archival materials (Figures 1 and 2), probably because the degree of archival research varies according to the demands of the particular topic. Oral interviews play an important role, especially in contextual (CEE) theological research where fewer written sources exist. The view of primary sources as written texts has been expanded to included oral sources as well.

As is increasingly obvious in other disciplines, theology students must interact with concepts and sources from other areas of study. Doctoral students are under much more pressure to integrate their theological research into the wider world of knowledge than are master's level students. The variation among doctoral students in the degree of inclusion of non-theological sources is probably caused by dissertation topics, and some, more than others, require interrelations with other disciplines.[23] Doctoral students in this study displayed behaviours also revealed in other studies of interdisciplinary scholars: reliance on a greater heterogeneity of sources and channels and heavy dependence on informal networks, including experts from other disciplines who provide hints to current relevant sources, help shape research, and teach use of appropriate technology.[24]

2.2 Electronic Sources

2.2.1 Usage of sources

The high ranking of websites in Figures 1 and 2 is surprising but also indicative of the rapid inclusion in an academic context of information from the internet. In their study of historians, Stieg Dalton and Charnigo found that 58% believed that websites contain helpful materials, even for primary research.[25] IBTS students, in general, are younger than those researched by Stieg Dalton and Charnigo and are open to new technologies.[26] The fact that IBTS students from CEE countries scored websites much higher than western students (see Figures 1 and 2) may

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[21] Stieg Dalton and Charnigo, "Historians," 404.

[22] Andy Barrett, "The Information-seeking Habits of Graduate Student Researchers in the Humanities," *Journal of Academic Librarianship* 31, no. 4 (July 2005), 329.

[23] Stieg Dalton and Charnigo, "Historians," 410, mention that their historians cite from various other disciplines (allocitation) and their list of disciplines cited comes very close to the disciplines listed by the respondents in this study with the exceptions of agriculture, military, and naval science. S. R. DeTiratel, "Assessing Information Use by Humanists and Social Scientists: A Study at the Universidad de Buenos Aires, Argentina," *Journal of Academic Librarianship* 26, no. 3 (2000), 346-354 also found that more than half of the philosophy and history professors' citations came from other fields (philosophy: autocitation 58.5%, allocitation 41.5%; history: autocitation 46.2%, allocitation 53.8%). Those in this study who used only theology materials were writing a master's thesis in Biblical Studies and were using primary biblical texts together with other scholars' commentaries on these.

[24] Carole L. Palmer and Laura J. Neumann, "The Information Work of Interdisciplinary Humanities Scholars: Exploration and Translation," *Library Quarterly* 50, no. 1 (2002), 85-117.

[25] Stieg Dalton and Charnigo, "Historians," 405.

[26] The increasing importance of websites is confirmed by other studies. K. B. Kelley and G. J. Orr, "Trends in Distant Student Use of Electronic Resources: A Survey," *College & Research Libraries* 64, no. 2 (2003), 187, note that 56% of their U.S.A. undergraduates and 71% of graduate students use the free web frequently. Use of general and discipline specific websites is also noted among British academics, with about 47% of English professors using news websites and some 20% using work-related sites about once a week (Gardiner et al., "A Snapshot," 347).

indicate that, due to the nonexistence or inaccessibility of theological libraries, they are under more pressure to find information, are less inhibited in considering websites for academic research, and are less established in print-bound research patterns. One would need to verify with a citation study whether websites are really quoted as often as claimed. Websites may be used in various ways, e.g., for orientation, to gain a broad overview, or as a guide to other materials, and may not necessarily be cited as authoritative sources. The websites listed by respondents as helpful in Question 2.4 displayed considerable breadth and seem to provide sufficiently authoritative content. Often these are websites pre-selected and categorised in academic portals/gateways, sites that contain national historical and archival collections, denominational sites that collect historical and current denominational materials, news sites, or sites with open-access e-books or e-journals. Regularly mentioned are Google Scholar, Google Book Search, and Amazon's Search Inside.[27]

The positive attitude toward electronic resources suggests that a generational shift has occurred in that information technology has become a common tool in research, even for theologians. The prominent use of the free web and consideration of e-zines, blogs, and other non-traditional formats for research (see Section 1.2) pose a challenge for faculty and librarians in educating students in effective searching and ways to evaluate and discern the reliability and accuracy of electronic information. One way of providing a filtering mechanism and increasing accessibility is to include relevant and credible resources from academic portals, i.e., Intute, Wabash Center, and others, in the online catalogue.[28]

Figures for preferred usage of online catalogues (97% of doctoral and 74% of master's students) and journal databases (49%-72%, depending on database, see Table 2) are higher in this study than reported by others.[29] Library catalogue use comes to 55.1% of students in Kelley and Orr's study,[30] to 29% of British English academics in the study by Gardiner et al[31] and to 4% of historians (though 18% use WorldCat) in Stieg Dalton and Charnigo's study.[32] Sixty-nine percent of Kelley and Orr's graduate students use databases[33] as do between 28% and 14% (depending on the database) of historians.[34] Buchanan et al. observed that scholars less privileged with access to well-stocked print libraries are more open to electronic resources, and that seems to apply to respondents in the current study.[35] The difference in numbers between established scholars and students, as observed above, may be

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[27] H. Maula and S. Talja, "Reasons for the Use and Non-use of Electronic Journals and Databases: A Domain Analytic Study in Four Scholarly Disciplines," *Journal of Documentation* 38, no. 4 (2003), 681, note the excitement of humanities scholars about Amazon, which they consider to be "complete in coverage" and offering a convenient possibility for purchase. Again the preoccupation of humanists with books can be noted.

[28] Intute Humanities is an academic portal of U.K. universities at http://www.intute.ac.uk/humanities; the Wabash Center Internet Guide to Religion (http://www.wabashcenter.wabash.edu/resources/guide_headings.aspx) aims to collect and annotate electronic resources for the study and practice of religion.

[29] Barrett's graduate students provide a similar list of electronic resources as considered helpful in this study: OPACs, discipline-specific CD-ROMs, internet search engines, and websites (Barrett, "Information-seeking Habits, 326). Having done qualitative interviews, Barrett offers only a situation description and no statistical figures.

[30] Kelley and Orr, "Trends," 180.

[31] Gardiner et al., "A Snapshot," 347.

[32] Stieg Dalton and Charnigo, "Historians," 411.

[33] Kelley and Orr, "Trends," 186.

[34] Stieg Dalton and Charnigo, "Historians," 411.

[35] G. Buchanan et al., "Information Seeking by Humanities Scholars," *Lecture Notes in Computer Science* 3652 (2005), 221.

caused by the fact that students are unsure of the field and so engage in more and varied searches, while scholars have already accumulated a knowledge base and developed strategies for current awareness that do not necessarily include library catalogues and database searches.[36] It is also reassuring to see that library licensed databases are still considered more helpful (72% use them to discover information) than search engines (53%).[37]

The numbers of non-users of electronic resources are worrying: an average of 11% (26% of master's students) never use library catalogues and 19% do not consider them helpful in discovering information. Wenderoth also found that theologians avoid bibliographic work with library catalogues—the problem is assumed to lie in the controlled vocabulary—and prefer to find relevant materials through personal recommendations, online bookstores, and search engines.[38] To improve library catalogue use, respondents suggested adding in the catalogue a virtual shelf view to enable browsing along materials of similar topics. This seems important when considering that 64% noted that serendipitous discovery happened for them while browsing along shelves.

Several accessible databases, to which students are alerted through the IBTS website, remain unused, such as IngentaConnect, RIM, and Ebrary. Low usage is observed for dissertation databases in general (no full-text) and of e-books. The possibility to list "other" helpful resources was little used, either because respondents did not bother to write down resources or they use no additional resources—possibly an instance of the "principle of least effort" in effect. Though disappointing, these results are not far off findings in other studies. As Gardiner et al. point out, 42% of English academics in their study never used e-books and only 15% of all respondents used indexing and abstracting databases.[39] Even though the follow-up study of historians demonstrates that "historians showed considerably greater knowledge of indexes and abstracts" as before, the usage of these barely reaches 20%.[40]

The difference in the expressed preference for the *ATLA RDB* (55%) over the *Index Theologicus* (8%) is surprising. The ATLA database is a long-established tool in theological research while *Index Theologicus* is less known and available online only since 2006. This may be the reason for low use. There may also exist the (faulty) perception that, due to some overlap between the databases, it suffices to search one. As indexes do not seem to be favourite research tools for theologians, they stay with the index they know.

Possibly, low use of materials, including electronic, is due to their subject irrelevance and to the imbalance between received results and invested time and effort, to which humanists seem to be especially sensitive.[41] No respondent mentioned using WorldCat, possibly also because of the discouraging situation that, even though one would know about the existence of a resource, due to the weak ILL infrastructure in CEE, there would be no possibility to obtain it. E-books will need to prove yet that they can offer advantages in content not otherwise available in print materials or digital libraries of journals.

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[36] Maula and Talja, "Reasons," 680. This seems to correspond to Lonnquist's categories of two types of searchers, mature and non-mature scholars, as she calls them (H. Lonnquist, "Scholars Seek Information: Information-seeking Behaviour and Information Needs of Humanities Scholars," *International Journal of Information and Library Research* 2 (1990), 196.

[37] See also Kelley and Orr, "Trends," 187.

[38] Wenderoth, "Research Behaviors," 180.

[39] Gardiner et al., "A Snapshot," 348.

[40] Stieg Dalton and Charnigo, "Historians," 409.

[41] S. E. Wiberley and W. G. Jones, "Time and Technology: a Decade-long Look at Humanists' Use of Electronic Information Technology," *College & Research Libraries* 61, no. 5 (2000), 421-431.

2.2.2 Problems in use

While theology students use electronic sources extensively, this does not mean that they use them effectively. The study neither asked for a self-evaluation on the success of their searches nor did it analyse search logs of these respondents.

All respondents were born before the age of the internet and IT was not included in their school curricula. Some of the younger participants could have grown up with internet access and exposure to electronic sources but, if economic considerations and the lack of internet access in the East is considered, none of the participants is likely to have had exposure before adulthood. Somewhat short-sightedly, Question 2.8 combined teachers and fellow students in one line. Other students may have been more useful in helping students to learn to use electronic resources than were teachers. The importance of these persons, especially to CEE male students, can be explained by the predominance of males in seminary and church education in these contexts, so communication on technology issues is influenced by factors of gender. The high number of those who learned to use electronic sources from librarians possibly reflects participation in the Information Literacy workshop obligatory for all incoming IBTS students. So, in a sense, the answers also intend to communicate to the librarians that their input has not been forgotten. The low number of CEE men and women who believe they would benefit from more instruction reflects the fact that they were taught to be self-sufficient and manage electronic sources by themselves, as well as other changes and upheavals in life.

From the responses to search strategy questions on the questionnaire (Questions 2.5 and 2.6), it seems that students have some skill in database use. However, to see that several standard database search techniques (varying search terminology, using limiters, checking subject terms) are performed by just over half of the participants (see end of section 1.3.3.) is not reassuring. When a third of the respondents claim to look through all results, this may be because of low skill, because of a habit of browsing, because they are afraid to lose something in the process, or maybe even a somewhat unrealistic assessment of their own activities. Buchanan et al. observe that only a few humanist users carefully select search criteria, and when information seeking moves from a clearly defined goal to a new subject, problems in searching emerge.[42] Stone anticipated that information technology will force humanists to think thoroughly through an issue before starting to search,[43] but others believe that the solution will not be as easy and that the nature of humanities research is just "not based on technical searching."[44]

Obviously, different respondents look for different things in databases; cumulatively, they closely match the humanist profile in that they appreciate primary sources, retrospective coverage, and directly relevant content. The prominence of primary sources stated here seems to contradict the slight disinterest for digitized primary sources in Question 2.3. This may express pragmatic thinking. Respondents do not like hunting for digitized primary sources all over the internet, as the question implied, but prefer to find them accumulated in a database. Annoyance with useful information scattered in many databases is explicitly expressed in the suggestion of a student to provide an overarching "comprehensive" database, a non-librarian's way to describe federated search. Respondents are ready to use paid-for subscription databases and expect the library to provide more electronic

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[42] G. Buchanan et al., "Information Seeking," 228.
[43] Sue Stone, "Humanities Scholars: Information Needs and Uses," *Journal of Documentation* 38, no. 4 (1982), 300.
[44] Maula and Talja, "Reasons," 680.

texts, or to digitize materials for them. They are not ready, or not able, to pay for materials themselves, quite in keeping with the study of Gardiner et al., where 50% of British academics asserted that payments discourage them from using electronic resources.[45]

2.3 Methods for information discovery

With the great variety of strategies that respondents use in parallel (more than 50% use at least six methods, including informal networks, citation chaining through bibliographies, library catalogues, database searches, personal libraries, and search engines), they fit Weintraub's characterisation of humanists as detectives[46] and Barrett's participants' summary of the research process as recursive, with "constant reading, digging, searching, following leads, and citation chasing."[47]

2.3.1 Informal networks

Although conversations with colleagues do not figure prominently with Stieg Dalton and Charnigo's historians, all four studies on theologians emphasise the importance of informal networks. Gorman found that 82.7% rely on peer consultation,[48] Wenderoth's interviewees sought support from their informal networks when starting a project and for current awareness,[49] Michels' study is all about people as informal research sources,[50] and, while Bronstein extracts a separate information activity such as networking, contacts with colleagues permeate almost each of the other activities.[51] The same is true of the students in the current study; even though they are involved in one-author projects, theology students depend on and value conversations with their supervisors, experts in the field, colleagues, and librarians. There is neither a significant difference between master's and doctoral students nor between students originating in East European or Western cultures. One must add that the institution consciously encourages interaction and provides venues for students to share research results with the wider public and receive feedback.[52] Such input proves valuable and is appreciated by students since they rank informal networks as the highest of the information discovery strategies and indispensable if "usual" channels break down.

Librarians rank somewhat lower in these informal networks; only 36% of the respondents (43% of doctoral students) consider them helpful. Nevertheless, these numbers are higher than in previous studies, possibly because of the small size of the institution where personal contact comes about somewhat more easily. While Barrett finds that his participants appreciated librarians primarily for help in locating hard-to-find materials,[53] no differentiation as to the kinds of assistance looked for from librarians was discernible in this study. Considering the importance

[45] Gardiner et al., "A Snapshot," 354.

[46] Karl J. Weintraub, "The Humanist Scholar and the Library," *Library Quarterly* 50, no. 1 (1980), 22-39.

[47] Barrett, "Information-seeking Habits," 327.

[48] Gorman, "Patterns," 149.

[49] Wenderoth, "Research Behaviors," 179.

[50] David H. Michels, "The Use of People as Information Sources in Biblical Studies Research," *The Canadian Journal of Information and Library Science* 29, no. 2 (2005), 91-109.

[51] J. Bronstein, "The Role of the Research Phase in Information Seeking Behaviour of Jewish Studies Scholars: A Modification of Ellis's Behavioural Characteristics," *Information Research* 12, no. 3 (2007), 48 pars.

[52] This emphasis is in line with standards set by accrediting agencies that underline that "theological research is both an individual and a communal enterprise, and is properly undertaken in constructive relationship with the academy, with the church, and with the wider public." (ATS General Institutional Standards, http://www.ats.edu/accrediting/standards/05GeneralStandards.pdf).

[53] Barrett, "Information-seeking Habits," 326.

attached to informal networks by theologians and considering the usually ambivalent or even strained relationship between humanists and librarians,[54] theological librarians should strive to belong to users' informal networks more closely and naturally. To do so, one will need to overcome the image of librarians as lacking subject expertise and being too busy.[55] Librarians need to strengthen the impression that they can actually offer serious training in search skills, an expressed need of humanists and the participants of this study. They wish for focused search skills training in order to find appropriate materials without losing too much time in the process.[56] The prediction of Jack King[57] that, as the number and complexity of electronic sources continues to grow, humanists will increasingly rely on librarians for guidance may be coming true. As Bronstein emphasises, the ability to understand and empathise with theologians' perceptions of effective research, recognize patterns in research behaviours, and adequately respond to activities they perform at different stages will be very important.[58]

2.3.2 Chaining and browsing

While citation tracking and chaining is key for historians, it is also very important for theologians.[59] In the current study, browsing through physical stacks received fewer responses, a pattern similar to that found by Gorman, who noted that 17.4% of his theologians didn't browse at all.[60] The number is even higher in the current study where only 21% of master's and 39% of doctoral students indicated they actually browse stacks in a library. This could be because they choose not to browse as they find sufficient relevant information through other methods. A more likely explanation is that with no access to theological libraries in close proximity, many of the students simply have few opportunities for browsing. This may be borne out by the impressive difference with respect to browsing practices between CEE (23%) and western (54%) students (Figure 7). This would then indicate an area calling for some attention. While not quite the same as browsing library stacks, using the internet seems, in a limited and less satisfying way, to allow browsing and chaining. Many databases allow users to view the references in a way that encourages chaining. As browsing activities shift to include electronic resources (websites and subject directories, online bookshops, publisher and library catalogues), the library needs to interlink these with its catalogue and offer links to TOCs, book reviews, snippets of full text (Amazon and Google Book Search), or any other abstracts that would allow more information about a book, journal, or other materials.

[54] Almost every study on humanists' research behaviours bemoans the not very helpful relationship between researchers and librarians. To list only a few: Gorman, "Patterns," 155; D. Sievert and MaryEllen Sievert, "Philosophical Research: Report From the Field," in *Humanists at Work: Disciplinary Perspectives and Personal Reflections*, ed. B.P. Lynch (Chicago: University of Illinois, 1989), 79-99; R. Watson-Boone, "The Information Needs and Habits of Humanities Scholars," *Reference Quarterly* 34, no. 2 (1994), 213; Wenderoth, "Research Behaviors," 180.

[55] Michels, "Use of People," 104, and many other studies. See a remark by one of the doctoral students: "Of course, I would be happy to discuss my work with the librarians and would be happy for them to recommend/suggest sources for my research work. However, I'm not sure that a library like ours has enough staff time to be caring about individual research topics when the researcher is neither 'stuck' nor asking specific questions."

[56] Cf. observations of Wiberley and Jones, "Time and Technology," 423-429.

[57] As quoted in Roberto Delgadillo and Beverly P. Lynch, "Future Historians: Their Quest for Information," *College & Research Libraries* 60, no. 2 (1999), 248.

[58] Bronstein, "Role of the Research Phase," par. 18 and 42.

[59] Stieg Dalton and Charnigo, "Historians;" 410; Bronstein, "Role of the Research Phase," par. 35 ("centrality of two information activities, browsing and citation tracking")

[60] Gorman, "Patterns," 149.

Web 2.0. technologies provide a powerful way to enhance library catalogues with the students' own knowledge base, and most respondents to this study seem to use them extensively. Continued use of these technologies would give them additional access to their valued informal networks.

2.3.3 Personal library

Though Barrett did not find that his participants rely on personal collections,[61] both Wenderoth[62] and Gorman[63] mention the tendency of theologians to use materials from personal libraries (21.2% in Gorman's study). The number was higher in this study, an average of 60%, possibly because of the distance education mode, geographical distance to a good theological library, and the almost non-existent interlibrary loan structures in CEE libraries. One of the solutions indicated for finding information if "usual" channels do not work was to purchase necessary books through online bookshops or ask overseas friends to provide them. Because of financial considerations, CEE students mark this strategy 13% lower and use online bookstores 29% less than their western counterparts (Figure 7).

Summary

The study set out to understand activities and attitudes of theology students in the research process and attempt to collect ideas for the ways librarians can enhance students' research process. The theological students in this study displayed clear similarities with humanists as well as notable differences. They tended to work in an interdisciplinary fashion, which results in a diversity of approaches taken to discover relevant information and an openness to various formats of sources. Differences from observed humanist behaviour may in part be due to the fact that the group under consideration are students, not accomplished scholars. They are experimenting with various strategies and behaviours and have not yet settled into established techniques. Some of the observed differences are due to technological developments that have changed research processes and behaviours for theology. Information technology has been partially embraced as a tool that expands accessibility and enhances certain processes of information seeking, but there is still a long way to go before technology's full potential is realised and used by these scholars. For this, database design needs to adapt to their specific ways of searching and browsing and include relevant content (retrospective coverage, primary sources, and both theological and interdisciplinary materials), and there must be the possibility for a federated search.

Differences are also caused by contextual aspects, such as studying at a distance, time pressure, acquiring information competency "on the run" in a self-initiated way, living in an information-poor environment, and finding creative ways to overcome barriers. While the humanist profile is evident throughout the diverse group, contextual, interdisciplinary, and technological aspects need to receive due attention in planning library services.

For the local library, study results point specifically to the need for improvements in the area of in-depth search skills training, the need to acquire more electronic resources, and possibly also digitization of certain (primary/required reading) materials. Developments in Web 2.0 technology need to be used to design the catalogue and other library practices more interactively. Sufficient and timely information (including reminders) on services and databases, especially in propagating document delivery and ILL, seems vital to connect to students and their needs.

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61 Barrett, "Information-seeking Habits," 329.
62 Wenderoth, "Research Behaviors," 181.
63 Gorman, "Patterns," 150.

Librarians need to become an integral part of the students' informal networks and know their research processes well to be able to conduct proactive reference services.

The study offers a good description of a local situation. Because of the non-representative sample at a multicultural institution that gathers initiative-taking and barrier-crossing students, the study findings cannot be fully transferable to all theologians. Although some traits will be common and confirm patterns observed in research on humanists' information behaviour, generalization across the field is not legitimate until similar studies are replicated.

Appendix—Questionnaire

INFORMATION NEEDS AND BEHAVIOURS OF **IBTS** STUDENTS

PERSONAL INFORMATION

1. The academic programme in which you are enrolled:

2. Your area of research/dissertation topic:

3. Your age:

    __ 20-29   __ 30-39   __ 40-49   __ 50-59   __ 60-69

4. Gender

    __ female   __ male

5. Country of origin: _____

1. SOURCES OF INFORMATION

1. Please check all types of materials that you consider to be important for your study and research.

__ Books	__ Journal articles	__ Theses and dissertations
__ Conference proceedings	__ Manuscripts, archives	__ Book reviews
__ Newspapers	__ Audio/visual materials	__ Oral interviews
__ Web sites	__ Government documents	__ Statistical sources

2. Please list any other materials you consider to be important.

3. Which of the above materials do you use most frequently (please list 3 types in the order of importance)?

4. How important is it that these sources share your theological position or denominational view?

    __ very important   __ important   __ somewhat important   __ not important

5. In your research, to what extent do you use resources that have only relevance to theology and to what extent do you include materials from other disciplines?

__ 100% theology resources   __ 75/25 % theology/ other areas   __ 50/50 % theology/ other areas   __ 25/75 % theology/ other areas

6. Please list disciplines, other than theology, that are important in your research.

7. What formats do you prefer (please check as many as you like)?

__ Print   __ Electronic   __ Microfiche/Microfilm   __ Other

8. How many and what languages do you read?

9. How do you deal with sources in languages other than these?

__ I try to find a translation (oral or written)   __ I run the text through a translating software (free or commercial)

__ I search for a summary or abstract of the source   __ I ignore the source

2. ELECTRONIC SOURCES

1. Which databases do you use most often for your study and research? Please check all databases that you consider to be helpful. The lists are taken from the IBTS Library website.

Library catalogues

__ IBTS online catalogue   __ other (please specify) _____

Full-text journal databases

__ Ebsco   __ ProQuest Religion   __ ATLASerials

__ Wales Online Library   __ Electronic Journals Library (U of Regensburg)   __ Open access journals in theology

__ Other (please specify) ___

Index journal databases

__ Index Theologicus   __ ATLA (CD-ROM)   __ Ingenta   Other _____

Dissertation databases

__ TREN   __ RIM Online   __ UMI dissertation express   Other _____

e-Books

__ Cambridge Collections Online   __ Ebrary   __ Gutenberg Project   Other _____

2. When I search a database, I appreciate:

__ relevance specifically to theology

__ broad interdisciplinary relevance

__ retrospective coverage (materials going far back into history, not only current publications)

__ inclusion of primary sources

__ current materials

__ user-friendly interface

__ many and varied search functions

3. Some primary source materials (for example: manuscripts, rare books, sacred texts, visual images) have been digitized and are available online. I use them

     __ Frequently   __ Sometimes   __ Rarely   __ Never

4. Which Web sites do you most frequently use?

5. When a search yields too many hits (check all answers that apply):

__ I start over again

__ I go through all results not wanting to miss any valuable information

__ I choose the most current information

__ I choose results from most respected authors or most respected journals in the field

__ I think of new terminology to use in my search

__ I use limiters (Boolean operators, limit year range, types of materials, etc.)

__ I look for another database

__ I ask a librarian for help

6. When a search yields too few results

__ I start over again with new terminology

__ I check the subject (topic or index) terms of the database

__ I look for another database

__ I ask a librarian for help

7. Please describe any problems you have encountered using databases.

8. How have you learned to use electronic sources? Please check all answers that apply.

__ I taught myself

__ I learned from my teachers and co-students

__ I learned from a librarian

__ I took a class or workshop outside of IBTS

__ I learned from my children

__ I learned through online tutorials

__ I have not learned how to use electronic sources

__ I would like more instruction in how to use electronic sources

9. How helpful have electronic sources been in helping you to find information?

__ Very helpful   __ Sometimes helpful

__ Rarely helpful   __ I do not use electronic sources

3. Methods of discovering relevant information

1. Please check all of the ways how you discover information for study and research.

__ Library catalogues	__ Abstracts, indexes	__ Database searches
__ Bibliographies of books and articles that you read	__ My personal library	__ Browsing the stacks in a library
__ Publisher catalogues	__ Listservs, forums, or blogs	__ New books shelf/website
__ Bookstores	__ Online bookstores	__ Search engines
__ Discussion with teachers and co-students	__ Experts at other institutions	__ Librarians

2. Please list any other ways you have discovered information.

3. Which are the most frequent ways that you discover information (please list 3 ways in the order of importance)?

4. What do you do when you cannot find needed information through your "usual" channels/methods?

5. How often does unintentional or accidental discovery (serendipity) play a role in finding helpful information? For example, while working on one topic you come across valuable information for an entirely different topic that you also need.

__ Frequently   __ Occasionally   __ Never

6. When does accidental discovery often occur? Please check all answers that apply.

__ Browsing stacks in a library	__ Browsing the Internet
__ Doing a search in an online library catalogue	__ Doing a search in an electronic database
__ Talking to scholars and co-students in the field	__ Reading works, book reviews, other publications
__ Reading messages on a listserv or online discussion forum	

7. What alerting or notification services do you use to discover information that has recently become available?

    __ RSS feeds   __ Table-of-contents services   __ Publishers alerts

8. Can you recall any instance when you avoided or consciously chose not to seek information from a source even though you believed that information relevant to your research might be available from that source? Please describe the situation.

4. LIBRARY SERVICES

1. Please check all library services that you have used or are using.

__ Borrowing and renewing materials	__ Assistance in using appliances (copy machine, scanner, DVD-writer, etc.)
__ Assistance in finding relevant materials	__ Assistance in locating materials
__ Interlibrary loan	__ Document delivery (request materials be scanned and e-mailed to you)
__ Assistance in using databases	__ Search skills training
__ Discuss your research with librarian	__ Order books through the library

2. Which service(s) do you use most frequently?

3. Please list any other ways in which you believe the library can assist you in finding relevant materials and helping you with your research.