USER PERSPECTIVES ON THE PROGRAM FOR COOPERATIVE CATALOGING BIBCO CORE RECORD STANDARD

A Pilot Study of the Core Bibliographic Record For Books

Final Report

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PURPOSE OF THE PROJECT

A. Statement of the Problem

In an era in which the rapid proliferation of information resources is set against a backdrop of spiraling costs and shrinking budgets, the words "faster, better, cheaper"[1] have become popular watchwords in the library world, perhaps nowhere so much as in the area of cataloging. Libraries nationwide have sought effective ways to reduce high cataloging costs while maintaining the quality of service to users. In 1994, the Library of Congress introduced the Program for Cooperative Cataloging (PCC) Core Record Standard. The Core Record Standard is intended to reduce cataloging costs by increasing both the pool of available cataloging records and the speed of cataloging while ensuring an acceptable level of data quality. The program's goal is to create a pool of records that can be used with a "minimum of intervention"[2] by libraries.

However, the use of the Core Record Standard has been somewhat controversial in the library community. PCC Core records provide less information than full-level catalog records but more than minimal-level cataloging records. Core level cataloging has now become the standard level for Library of Congress records, which are frequently used by libraries without modification. This has led to the question of how well Core records meet the needs of users, particularly with respect to the sufficiency of bibliographic data. While research is underway to evaluate the effectiveness of Core Record Standard as a cost- and timesaving measure for library cataloging operations, there has been no study to date of its impact on catalog users. Core records have been developed for a number of formats. This pilot study's focus is the ability of the Core Bibliographic Record standard for Books to meet the information needs of catalog users. When the term "Core" is used, it refers to the Core Bibliographic Record for Books.

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[1] *Introduction to the Program for Cooperative Cataloging BIBCO Core Record Standard*, 1999- Available online at
http://lcweb.loc.gov/catdir/pcc/bibco/coreintro.html

[2] Ibid.

B. Objectives of the Study

1. To test the usefulness of the proposed methodology as a means of gathering data about the impact of the Core Record Standard on catalog users.
2. To gather data on the areas of Full-Level catalog records identified as most important to three groups of catalog users: undergraduates, graduate students, and faculty.
3. To gain an understanding of whether the Core Record Standard reflects the areas identified by these users as most important.
4. To better understand how much information is needed in a catalog record, and whether the amount of information needed is affected by variables such as user group.
5. To gain an understanding of how well the Core record supports the user tasks *find*, *identify* and *select*, as defined in the *Functional Requirements for Bibliographic Records* (***FRBR***)[3] document.

C. Brief History of the Project

K.M. Letarte originally undertook the project in August 1999 as a component of participation in the Association of Research Libraries Leadership and Career Development Program. During the design phase of the research, Letarte was appointed to the Model C Task Force of the PCC Standing Committee on Standards. The Task Force is charged with the development of Model C, a research model to study the impact of the Core Record Standard from the user perspective. The Task Force felt that conducting a pilot study would be a valuable adjunct to the development of Model C. Karen Calhoun (Cornell University) and Mike Prasse (OCLC) assisted with the initial design of the research. Ann Caldwell (Brown University) and Joan Schuitema (Loyola University Chicago) were instrumental in obtaining financial support for the pilot study. M.R. Turvey joined the study as chief research partner in August 2000. Anne Schalda, Institutional Researcher (Drury University), was the statistical consultant for the study. The study was funded by the PCC and through a Faculty Research Grant from Southwest Missouri State University (SMSU). The Department of Library Science at SMSU provided additional funding.

RESEARCH DESIGN AND METHODS

A. Participant Pool

A random sample containing 2655 names of undergraduates, graduate students, and faculty was generated from the SMSU Libraries' patron database to form the participant pool. The following were eliminated from the pool: duplicate names, names of individuals not enrolled or employed at the Springfield campus, individuals no longer associated with the University, individuals without a valid campus email address, per-course faculty, administrators and other non-teaching personnel. 1035 individuals from this pool (143 faculty, 355 graduate students, 537 undergraduates) were invited by email to participate in the study. As an incentive to encourage their participation, students (both graduate and undergraduate) were offered a $15 Barnes & Noble bookstore gift certificate. Faculty members were offered the opportunity to have a gift plate placed in a new book in their honor. 109 individuals responded, for a response rate of

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[3] IFLA Study Group on the Functional Requirements for Bibliographic Records, *Functional Requirements for Bibliographic Records: Final Report*. (München: K.G. Saur, 1998); available online at http://www.ifla.org/VII/s13/frbr/frbr.pdf

10.5%. Of these 109, 75 actually participated in the study. The participant group of 75 was comprised of 26 faculty members, 25 undergraduates, and 24 graduate students.

B. Methodology for Data Collection

Interviews were held in at SMSU over a three-week period, from March 5-23, 2001. Two researchers, Letarte and Turvey, conducted the interviews. Most participants completed the tasks in 30 minutes or less. At the interview, each participant received a packet containing the 4 card sets representing the 4 bibliographic records, 4 corresponding questionnaires, an instruction sheet, and a consent form to be signed. A unique number identified each packet. Consent forms were collected and stored separately from the data packets so that identifying information would not remain in the packets.

Participants were asked to examine 4 catalog records for social science monographs, 2 cataloged at Core level and 2 cataloged at Full level. The records were chosen from the OCLC database, with Library of Congress cataloging preferred. A copy of each record is included (see Appendix A). Following the specifications for the Core Bibliographic Record for Books,[4] the records were divided into fields, with each field recorded on a separate colored card. The following fields were included when present on the records:

- 020 ISBN
- 050 LC call no.
- 082 DDC call no.
- 1XX Main Entry
- 240 Uniform Title
- 245 Title, other title, statement of responsibility
- 250 Edition statement
- 260 Imprint (place of publication, publisher, and date of publication)
- 300 Physical description
- 440 Series statement
- 5XX Note fields, including:
    - 504 Bibliography note
    - 505 Contents note
- 6XX Subject headings
- 7XX Added entries

A card environment was chosen in order to avoid any potential influence that specific user interfaces in an online environment might have on the results.

For collocation and ease of data analysis, each record was assigned a color, and each card was numbered on the back. The Core records were orange and green, the Full records, yellow and purple. Each card set was accompanied by a questionnaire of the corresponding color. A space was provided on each card for participants to rank the usefulness of the data element. The fields were not labeled either with MARC tags or descriptive labels. Participants were instructed to ask for help identifying data elements if necessary. By way of example, a photocopy master for part of the Orange Core record card set is included in Appendix B. Participants ranked the usefulness of each data element according to the following scale:

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[4] Available online at http://www.loc.gov/catdir/pcc/corebook.html

1= definitely not needed
2= somewhat useful
3=no opinion
4= useful
5=absolutely essential

The scale was designed in consultation with Dr. James Davis of the SMSU Department of Psychology.

Participants also responded to a color-coded questionnaire for each record. The questionnaire attempted to elicit information about the sufficiency of information in each record as well as elements not included in the record that would have been useful. The first section asked participants to rank their level of agreement with six statements about each record as a whole. The second section addressed the usefulness of elements not included on the record. The questionnaire and accompanying instruction sheet can be found in Appendices C and D.

C. Data analysis

Data from the card sets and questionnaires were input into Excel, then imported into SPSS for statistical analysis. Dr. David Goodwin of the SMSU College of Education provided initial statistical assistance. As the project's statistical consultant, Anne Schalda, Institutional Researcher at Drury University, provided further statistical expertise.

Participant responses were compared for Core and Full level records in order to examine the perspectives of users from all three participant groups (faculty, graduate, and undergraduate students). Responses were explored at a variety of levels. Data collected from the card sets addressed the users' perceptions of the usefulness of the individual data elements in Core and Full records. Data from the questionnaires provided information about users' satisfaction with Core and Full level records as a whole, as opposed to individual data elements. The questionnaires attempted to address the sufficiency of information in both record types, as well as their ability to support three specific user tasks: find, identify, and select.

D. Research Questions

Analysis of the results was guided by several research questions.

1. What were the most important data elements in Core and Full records as ranked by all users?

2. Did users agree on a definable set of most essential elements?

3. How do the elements constituting the Core record standard compare to those elements ranked as most essential by users?

4. Were there differences in the ways that users ranked the Core level records (orange and green) vs. the Full level records (yellow and purple)? In other words, did users view either the Core or the Full level record as more useful than the other?

5. Did users find that the Core record contained sufficient

- Author entries?
- Title entries?
- Subject headings?

6. Were there differences in responses between faculty, graduate students and undergraduates with respect to
   A. Usefulness of data elements
   B. Sufficiency of information in the Core records (orange and green) for
   - Author entries?
   - Title entries?
   - Subject headings?

7. How well did Core and Full records support the user tasks *find, identify and select* as defined in the document *Functional Requirements for Bibliographic Records*?[5]

In considering the answers to these questions, the investigation will first focus on user perspectives on the individual data elements in Core and Full level records. User perception of the usefulness and effectiveness of each record type as a whole will then be explored.

RESULTS

ANALYSIS OF DATA FROM THE CARD SETS: USEFULNESS OF INDIVIDUAL ELEMENTS IN CORE AND FULL RECORDS

A. Responses for Core Record for All Users

In order best to analyze the data obtained from the core record card sets, composite Core values were created by combining all data for each element from all of the cards. For example, all user input for the Title for both the Orange and the Green Core records were combined and means for each data element were then calculated in SPSS. As the Orange record contained a single author and the Green record contained a single editor, these data were combined into a single category: Primary author or editor. All types of subject headings, whether topical or geographical, were combined into one category, Subject headings. The N-values for a data element varied depending upon the number of times that element occurred in one or both Core records. The categories used to analyze the Core record elements were as follows:

- ISBN
- LC call number
- DDC call number
- Primary author or editor
- Title
- Edition
- Imprint
- Physical description

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[5] IFLA Study Group on the Functional Requirements for Bibliographic Records, *Functional Requirements for Bibliographic Records: Final Report*. (München: K.G. Saur, 1998); available online at http://www.ifla.org/VII/s13/frbr/frbr.pdf

- Series
- Bibliography note
- Subject headings

Table 1 shows the mean level of usefulness of data elements in the two Core level records (orange and green) in order of decreasing usefulness, as ranked by all users. Users ranked the usefulness of elements according to the following scale:

1=definitely not needed, 2=somewhat useful, 3=no opinion, 4= useful, 5=absolutely essential

Table 1
Usefulness of Data Elements in Core Records as Ranked by All Users

Record Element	N	Min.	Max.	Mean	SD
Title	149	2	5	4.68	.6270
Primary Author or Editor	149	1	5	4.46	.9831
LC Call No.	149	1	5	4.08	1.2709
Imprint	149	1	5	3.81	1.3135
Subject Headings	298	1	5	3.69	1.0464
Series	75	2	5	3.69	1.0523
Edition	74	1	5	3.36	1.4578
Physical Description	149	1	5	3.09	1.3673
Bibliography Note	148	1	5	3.06	1.3105
DDC Call No.	149	1	5	2.98	1.3580
ISBN	298	1	5	2.41	1.3710

Users as a whole considered the title, primary author or editor, and LC call number to be the most useful elements in the Core record. The title, with a mean of 4.68, was ranked by far as the most useful element in the record. This was followed by the primary author or editor, with a mean of 4.46, and the LC call number, with a mean of 4.08. Somewhat less useful, as ranked by users, were imprint (3.81), subject headings and series (both 3.69), and edition (3.36). Users were neutral about the usefulness of the physical description (3.09), bibliography note (3.06) and DDC call number (2.98). The ISBN was clearly perceived as the least useful Core data element with a mean of 2.41.

B. Responses For the Full Record for All Users

Composite mean values for the Full record data elements were calculated similarly to those in the Core data set above. The categories used to analyze the Full record elements were:

- ISBN
- LC call number
- DDC call number
- Primary author or editor
- Uniform title
- Title

- Imprint
- Physical description
- Series
- Bibliography note
- Contents note
- Subject headings
- Added author or editor

As with the Core record data, N-values also varied for the Full record data elements. Table 2 shows the mean level of usefulness of data elements in the two Full level records (yellow and purple). Users ranked the usefulness of elements according to the following scale:

1=definitely not needed, 2=somewhat useful, 3=no opinion, 4= useful, 5=absolutely essential

Table 2
Usefulness of Data Elements in Full Records as Ranked by All Users

Record Element	N	Min.	Max.	Mean	SD
Title	149	1	5	4.69	.6768
Primary Author or Editor	150	1	5	4.57	.8850
Added author or Editor	150	1	5	4.27	1.1695
Series	75	1	5	4.08	.8662
LC Call No.	150	1	5	4.07	1.1909
Imprint	150	1	5	3.90	1.1629
Contents Note	149	1	5	3.87	1.1699
Subject Headings	600	1	5	3.53	1.0541
Uniform Title	74	1	5	3.47	1.2845
Bibliography Note	150	1	5	3.27	1.3306
DDC Call No.	149	1	5	2.99	1.3705
Physical Description	148	1	5	2.99	1.3602
ISBN	225	1	5	2.41	1.3505

Users ranked the usefulness of elements in the Full record similarly to those in the Core record. Again, the elements ranked as most useful (by means) are title (4.69), responsible persons, either primary authors (4.57) or personal name added entries (4.27), and the LC call number (4.07). Users also ranked series (4.08) as a useful element. Nearly as useful, with means of 3.90 and 3.87 respectively, are the imprint and contents note. The subject headings and uniform title, with means of 3.53 and 3.47 respectively, are the next most useful elements. Users again displayed neutral feelings about the physical description and DDC call number, with both means near 3.0. The bibliography note on the Full record was ranked slightly higher than that for the Core record, with a mean of 3.27 (Full) as opposed to 3.06 (Core). The ISBN was again ranked as the least useful element.

C. Variations in Responses for Core Record by User Group

Table 3

Elements in Core Record By User Group
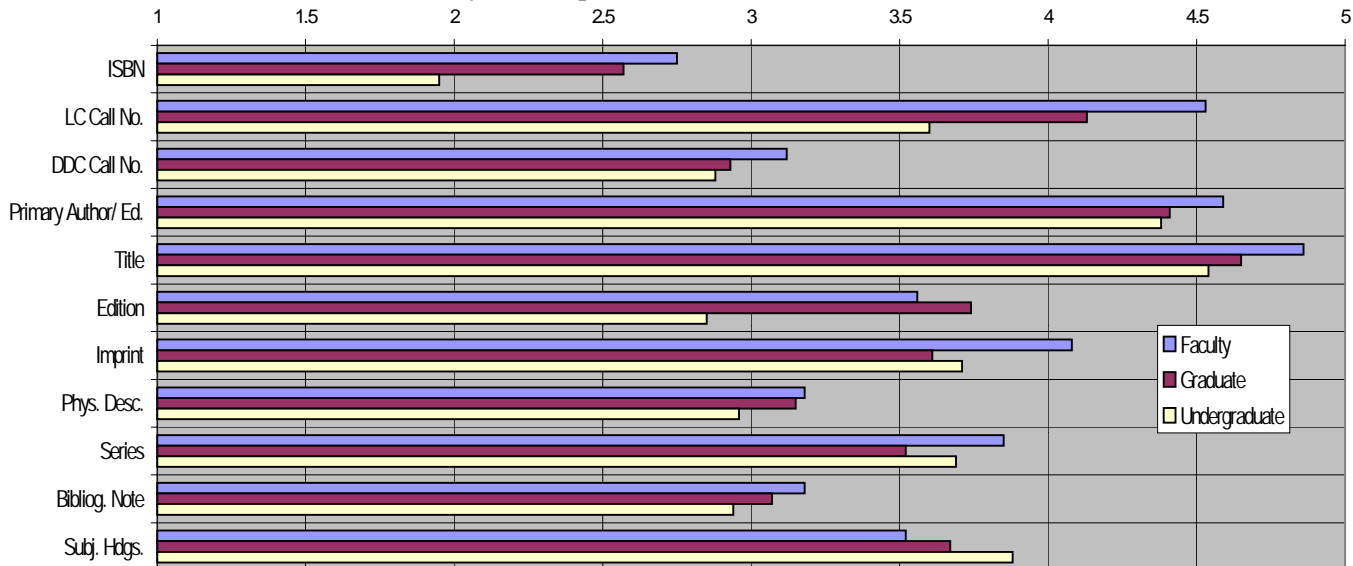
	Subj. Hdgs.	Bibliog. Note	Series	Phys. Desc.	Imprint	Edition	Title	Primary Author/Ed.	DDC Call No.	LC Call No.	ISBN
Faculty	3.52	3.18	3.85	3.18	4.08	3.56	4.86	4.59	3.12	4.53	2.75
Graduate	3.67	3.07	3.52	3.15	3.61	3.74	4.65	4.41	2.93	4.13	2.57
Undergraduate	3.88	2.94	3.69	2.96	3.71	2.85	4.54	4.38	2.88	3.6	1.95

The next question to consider, beginning with the Core records, is whether the ranking of data elements in either record set varied significantly by user group. For example, did faculty users as a group consider certain elements to be more important than did undergraduates as a group?

Although there were differences in rankings between the three user groups surveyed, users basically agreed upon the usefulness of data elements. For the purposes of this investigation, a useful element is defined as one with a mean greater than or equal to 4.0 (useful to essential). Table 3 above displays the mean responses of each group for the elements in the Core record.[6] Users in all three groups agreed on the usefulness of the primary author or editor, and the title. Graduate students and faculty agreed on the usefulness of the LC call number. Faculty also ranked the imprint as a useful element.

In general, faculty ranked data elements as more useful than did graduate students and undergraduates, and graduate students ranked elements as more useful than did undergraduates. Two exceptions to this are edition and subject headings, which graduate students rated as more useful than did faculty (means of 3.74 vs. 3.56 for edition; 3.67 vs. 3.52 for subject headings). Undergraduates also ranked series and imprint as more useful than did graduate students. The most interesting finding, however, is that undergraduates found subject headings significantly more useful than did either faculty or graduate students, with means of 3.88 for undergraduates as opposed to 3.52 and 3.67 for faculty and graduate students respectively.

Although an examination of the mean responses is certainly helpful to gain a general understanding of user perception, the means alone do not provide a complete picture. It is also important to understand how strongly users agreed on their responses, and how much variation of response occurred across the entire pool of users.

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[6] For full statistical information, see Tables 3A-3C in Appendix E.

In order to assess the differences in response by user group, two statistical methods were used. First, a one-way ANOVA was used to analyze the variance of means in responses for the elements in both record sets. The dependent variable was the response for each element and the independent variable was the user group, either faculty, graduate or undergraduate student.

The ANOVA revealed four elements in the Core record in which responses varied significantly by user group: the ISBN, the LC call number, the title, and the subject headings. However, as the ANOVA alone cannot indicate which pair of groups responded differently in each instance, a Scheffe test was performed post hoc in order to determine which pairs of user groups responded differently with respect to these elements. The results of the ANOVA for the Core record elements are contained in the first 7 columns of Table 4. For both the ANOVA and the Scheffe, a p value less than or equal to .05 indicates a significant difference in response.

Table 4
Core Elements for which Ranking Varied Significantly by User Group

Record Element	Groups	df	Sum of Squares	Mean of Squares	F	Sig.*	Scheffe Subjects (Sig.)**
ISBN	Between	2	35.491	17.745	10.014	.000*	Faculty vs. Undergraduate (p=.000)**, Graduate vs. Undergraduate (p=.006)**
	Within	295	522.741	1.772			
	Total	297	558.232				
LC Call No.	Between	2	22.591	11.296	7.619	.001*	Faculty vs. Undergraduate (p=.001)**
	Within	146	216.443	1.482			
	Total	148	239.034				
Title	Between	2	2.777	1.389	3.660	.028*	Faculty vs. Undergraduate (p=.031)**
	Within	146	55.397	.379			
	Total	148	58.174				
Subject Headings	Between	2	6.918	3.459	3.206	.042*	Faculty vs. Undergraduate (p=.043)**
	Within	295	318.294	1.079			
	Total	297	325.211				

*One-way ANOVA, $p \leq .05$ ** Scheffe, $p \leq .05$

In most instances, the two user groups whose responses differed significantly were faculty and undergraduate students. The Scheffe test results reveal statistically significant differences in the responses of faculty and undergraduate users for four of the elements, and between graduate students and undergraduates as well in one case. For the purposes of the test, the hypothesis holds that the ranking of data elements in both record sets will vary significantly by user group. The null hypothesis states that the ranking of data elements will not vary significantly by user group. The F value is large enough to reject the null hypothesis for the four elements in Table 4 above, indicating that there is a significant difference in the ways that faculty and undergraduates view them.

The results of the ANOVA and Scheffe tests confirm the differences that can be seen in mean usefulness of these data elements as ranked by faculty and undergraduates (Table 3). Undergraduates viewed the LC call number and title as much less useful than did faculty. In the case of the title in particular, the statistical tests reveal that there was greater variability in the

response of undergraduate users as compared to faculty than the means alone would suggest. Undergraduates as a group ranked ISBN as significantly less useful than did faculty or graduate students. However, undergraduates viewed subject headings as significantly more useful than did faculty.

With the exception of the ISBN, LC call number, title and subject headings, there were no statistically significant differences in response between user groups to the elements in the Core record. All other data elements were viewed similarly by users.

D. Variations in Responses to Full Record By User Group

Although the exact ranking varied from user group to user group, there was general agreement

Table 5
Elements in Full Record By User Group
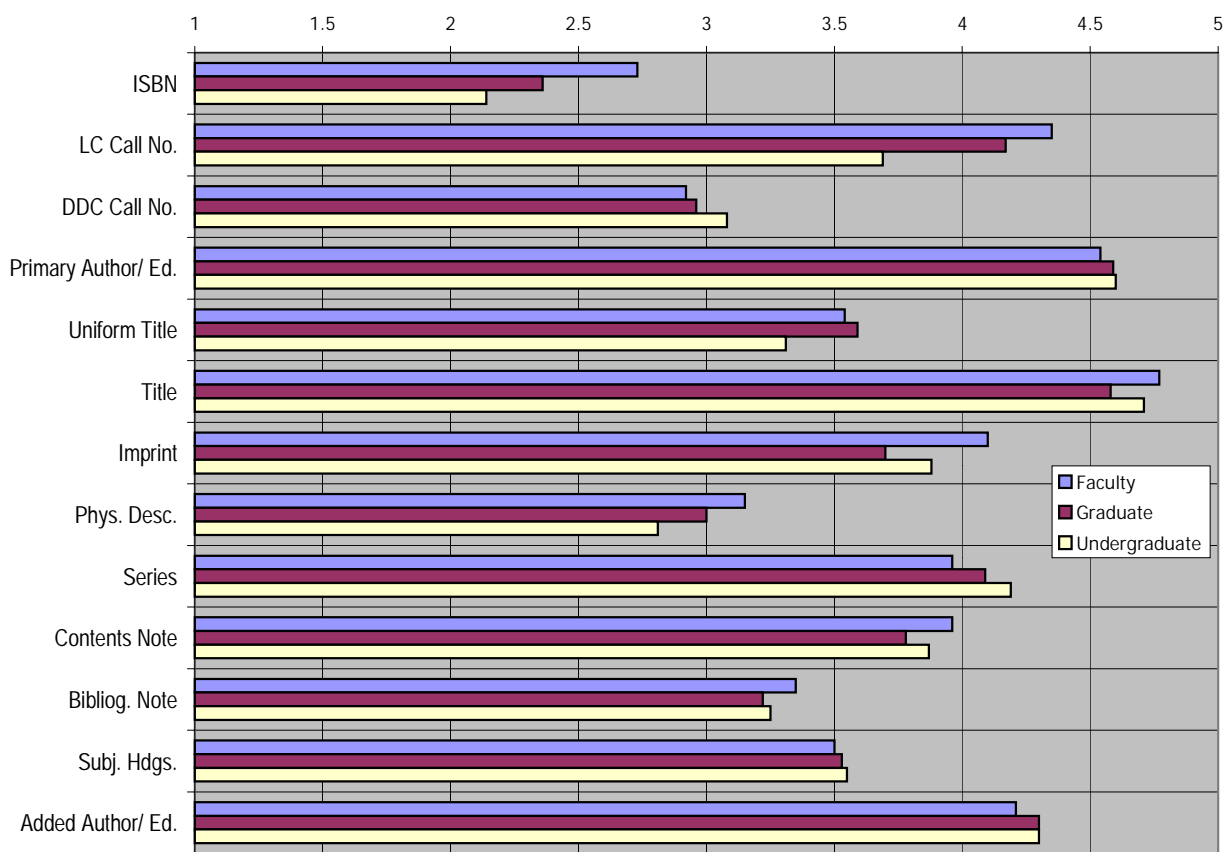
	Added Author/ Ed.	Subj. Hdgs.	Bibliog. Note	Contents Note	Series	Phys. Desc.	Imprint	Title	Uniform Title	Primary Author/ Ed.	DDC Call No.	LC Call No.	ISBN
Faculty	4.21	3.5	3.35	3.96	3.96	3.15	4.1	4.77	3.54	4.54	2.92	4.35	2.73
Graduate	4.3	3.53	3.22	3.78	4.09	3	3.7	4.58	3.59	4.59	2.96	4.17	2.36
Undergraduate	4.3	3.55	3.25	3.87	4.19	2.81	3.88	4.71	3.31	4.6	3.08	3.69	2.14

between all user groups (faculty, graduates, undergraduates) on the usefulness of primary author or editor, title, and added author or editor in the Full level records. Faculty and graduate students

also agreed on the importance of the LC call number. Series information was considered useful by graduate and undergraduate students, but not ranked as such by faculty. Faculty again ranked the imprint as a useful element. These results are shown in Table 5.[7]

As with the elements in the Core data set, ANOVA and Scheffe tests were performed to examine significant differences in response by user group to elements in the Full record. The only two elements in the Full record on which there are statistically significant differences in response by user group are the ISBN and the LC call number, shown in Table 6. In these two instances, the null hypothesis was rejected. The final column of Table 6 also shows the results of the post-hoc Scheffe test for these cases.

Table 6
Full Level Elements with Significant Differences Between User Groups

|	ANOVA						Scheffe
Record Element	**Groups**	**df**	**Sum of Squares**	**Mean of Squares**	**F**	**Sig.**	**Subjects/Sig.****
ISBN	Between	2	13.823	6.912	3.887	.022*	Faculty vs.
	Within	222	394.737	1.778			Undergraduates
	Total	224	408.560				(p=.024)**
LC Call no.	Between	2	11.878	5.939	4.377	.014*	Faculty vs.
	Within	147	199.455	1.357			Undergraduates
	Total	149	211.333				(p=.019)**

*One-way ANOVA, p ≤ .05 ** Scheffe, p ≤ .05

Once again the Scheffe test revealed that that in each case the disagreement lay between the faculty and undergraduates with p=.024 for ISBN and p=.019 for LC call number. For the remainder of the elements in the Full record, there were no significant differences in rankings according to user group.

E. Comparison of Full and Core Level Elements

Results of the ANOVA and Scheffe tests demonstrate that with the exception of six record elements (the Core ISBN, Core LC call number, Core Title, Core Subject headings, Full ISBN and Full LC call number), there were no significant differences in response between faculty, graduate and undergraduate students with respect to the usefulness of data elements in Core and Full records. Table 7 shows a comparison of mean rankings of data elements in Core and Full Records by **all** users.

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[7] Full statistical information is shown in Tables 5A-5C, Appendix E.

Table 7
Core Vs. Full Data Elements, All Users
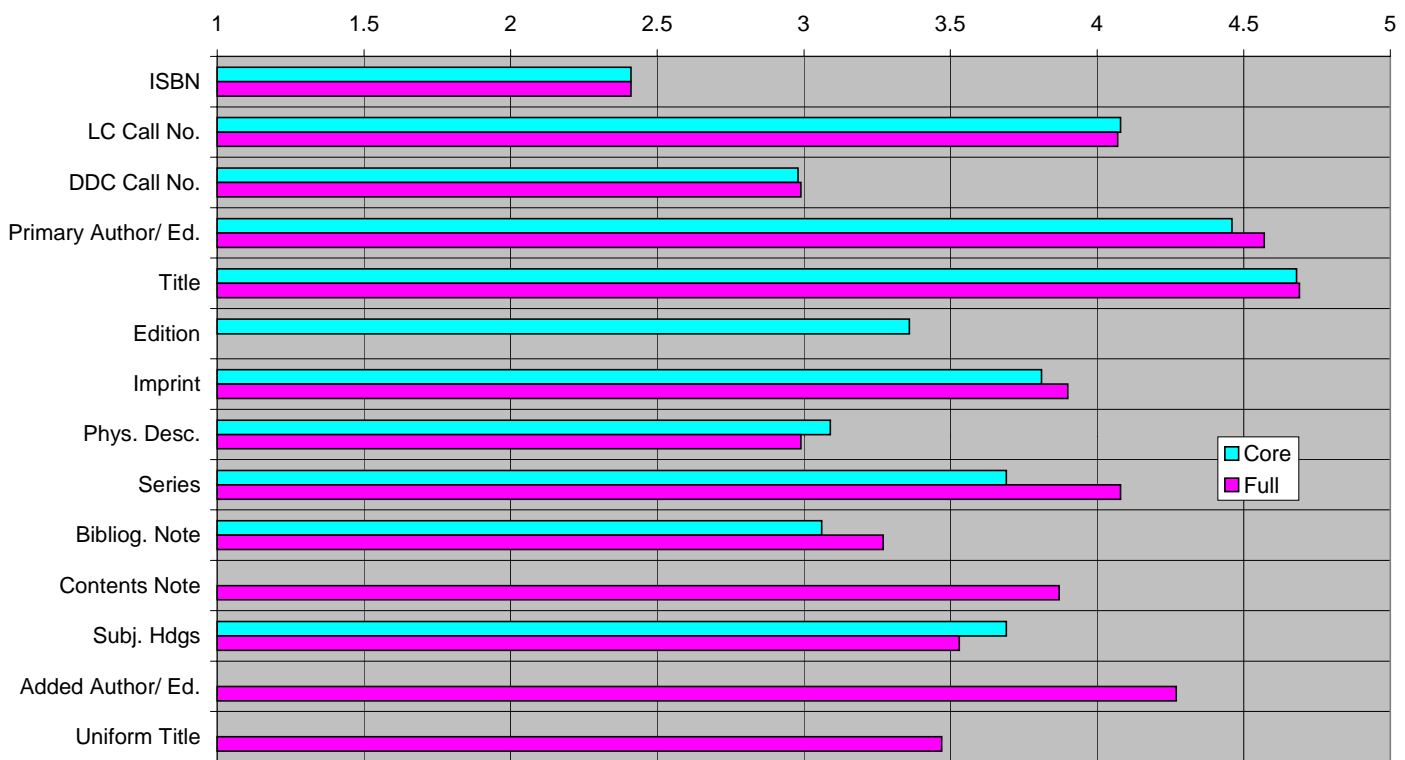
	Uniform Title	Added Author/ Ed.	Subj. Hdgs	Contents Note	Bibliog. Note	Series	Phys. Desc.	Imprint	Edition	Title	Primary Author/ Ed.	DDC Call No.	LC Call No.	ISBN
Core			3.69		3.06	3.69	3.09	3.81	3.36	4.68	4.46	2.98	4.08	2.41
Full	3.47	4.27	3.53	3.87	3.27	4.08	2.99	3.9		4.69	4.57	2.99	4.07	2.41

An examination of the elements in either record set with mean rankings greater than or equal to 4.0 (useful to essential) by all users suggests taking the following as the set of most useful data elements:

- Title
- Primary author or editor
- Added author/editor entries
- LC Call no.
- Series

With the exception of added author or editor entries, which occurred only in the Full records for this study, all of these data elements appear in both record sets. It is also important to note that the series is ranked above 4.0 only for the Full level records but not for the Core. For the most part, users in all three groups agreed upon the usefulness of this set of elements across both record sets. However, the ANOVA and Scheffe tests revealed that undergraduates found the LC Call number and title on the Core records significantly less useful than did users in other groups. In the case of the title element, this finding may have less practical significance, as the mean ranking by undergraduates as a group is still well above 4.0. Undergraduates ranked the LC call number on the Full record as significantly less useful as well.

F. Prescribed Elements in the Core Record Standard in Comparison to User Perceptions of Usefulness

When compared with the set of data elements identified by users as most essential, the set of data elements encompassed by the Core Record Standard appears to meet users' needs quite well. The Core Record Standard mandates the use of all elements ranked above by users as most useful. Not surprisingly, there was little difference between users' rankings of data elements in the Core record and their rankings of those same elements in the Full, since all elements in the Core record are included in the Full. For certain data elements, there were some statistically significant differences between the rankings of undergraduates and those of faculty.

ANALYSIS OF DATA FROM THE QUESTIONNAIRES: SUFFICIENCY OF CORE AND FULL RECORDS AS A WHOLE

Rather than focusing on the individual data elements in each record type, the questionnaires posed six questions, providing a snapshot of the usefulness and effectiveness of the whole record (Core versus Full) to the user. The questionnaires asked users to think of the elements ranked earlier in the four card sets as four whole records. When users considered each record as a whole, information was gathered concerning the its ability to meet the overall needs of each of the three groups of users (faculty, graduates, and undergraduates) in the pilot study.

Questionnaires asked users to indicate their level of agreement with six statements. The first three statements concerned the ability of Core and Full records to support three of the ***FRBR*** user tasks, *find, identify* and *select*.[8] The remaining statements addressed the sufficiency of author, title and subject headings in Core and Full records. Users indicated their level of agreement with each statement using the following scale:

1=strongly disagree 2=somewhat disagree 3=no opinion 4=somewhat agree 5=strongly agree

The analysis of the data obtained from the questionnaire centers on three research questions:

- Do users find that the Core record contains sufficient author entries, title entries and subject headings?
- Do users find either the Core or the Full level record more useful than the other?
- How well do Core and Full records allow users to accomplish the three user tasks: Find, Select, and Identify?

Users Tasks and the Pilot Study

One of the crucial questions with respect to the impact of the Core record on users is whether the Core contains sufficient information to meet users' needs. The Model C Task Force of the PCC Standing Committee on Standards has been developing Model C, a research model for studying the Core record from the user's perspective. The Task Force has used the taxonomy of bibliographic entities, attributes, and user tasks described in the IFLA document, *Functional*

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[8] IFLA Study Group on the Functional Requirements for Bibliographic Records, *Functional Requirements for Bibliographic Records: Final Report*. (München: K.G. Saur, 1998); available online at http://www.ifla.org/VII/s13/frbr/frbr.pdf

Requirements for Bibliographic Records (**FRBR**),[9] in designing the model. The researchers felt that it would be helpful to address the question of user tasks in the pilot study. The first three items on the questionnaire attempt to determine the extent to which both Core and Full records allow users to accomplish three of the user tasks described in **FRBR**.

The first item aims to elicit information from the user about the record's ability to support the user task *Find* as defined in **FRBR**: to find entities that correspond to the user's stated search criteria (i.e., to locate either a single entity or a set of entities in a file or database as the result of a search using an attribute or relationship of the entity).[10]

The second item is concerned with the user task, *Identify*: to identify an entity (i.e., to confirm that the entity described corresponds to the entity sought, or to distinguish between two or more entities with similar characteristics).[11]

The third question addresses the user task, *Select*: to select an entity that is appropriate to the user's needs (i.e., to choose an entity that meets the user's requirements with respect to content, physical format, etc., or to reject an entity as being inappropriate to the user's needs).[12]

Composite Core and Full Questionnaire Data

Examination of the four questionnaires (two Core and two Full) individually does not provide an overall picture of users' perceptions of Core records and Full records. To gain a more useful perspective of user response to each record type, composite Core and composite Full scores were created for each of the six items on the questionnaire. The composite Core scores were created by merging data for the orange and green Core records, then calculating means and standard deviations in SPSS. The composite Full scores were obtained in a similar fashion. Thus six pairs of composite scores (a Core score and a Full score for each of the six questionnaire items) were obtained. These composite data sets were used throughout the analysis of the questionnaire items. In the composite analysis, two of the 149 questionnaires were eliminated due to missing data, leaving N=147.

A. Sufficiency Of Information In Core And Full Level Records

The next issue addressed is that of users' perceptions of the adequacy of Core records and Full records in and of themselves, considered in isolation from one another. An area of controversy for Core records is whether they contain "enough" information. Do users believe that Core and Full level records contain sufficient information to meet their needs?

In an effort to answer this question, separate single-sample one-tailed t-tests were performed on the composite Core and Full datasets for each of the six questionnaire items. For testing purposes, response levels higher than 4.0 on items were interpreted as an indication of perceived sufficiency of records with regard to those items. In other words, for each of the twelve tests performed, the null hypothesis

H_o Mean response on this item is less than or equal to 4.0

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[9] Ibid.
[10] Ibid.
[11] Ibid.
[12] Ibid.

is interpreted to mean that users find the record in question to be insufficient with regard to that item. Tables 8A and 8B show user perceptions of sufficiency of Core and Full records with respect to the questionnaire items.

Table 8A
Do Core Records Contain Sufficient Information?

Question	Total N	Mean	SD	df	t	Sig.*
You have a citation for this item. This record contains sufficient information for you to find the item in a library catalog (*Find*)	147	4.4218	.9646	146	5.301	.000*
This record contains sufficient information for you to identify this item from among a group of like items in a library catalog (*Identify*)	147	4.2381	1.0555	146	2.735	.0035*
You are seeking a particular version of this item. This record contains sufficient information for you to distinguish whether or not this is the item you are seeking (*Select*)	147	3.9320	1.2256	146	.673	.251
This record contains sufficient author entries	147	4.1565	1.1569	146	1.640	.0515
This record contains sufficient title entries	147	4.0612	1.2344	146	.601	.2745
This record contains sufficient subject headings	147	3.8912	1.2114	146	1.089	.139

*Single sample one-tailed t-test, p ≤ .05 (when p=.000, actual p < .00025 for one-tailed)

For the first two cases in Table 8A, which address the **FRBR** user tasks *find* and *identify,* the null hypothesis can be rejected. Users appear to believe that the Core records they examined contain sufficient information to allow them to find the items in a library catalog. They also indicate that the Core records contain enough information for them to identify the items from among groups of like items in a catalog. However, the null hypothesis cannot be rejected for any of the remaining four questionnaire items. From the data obtained in the pilot study, there is not sufficient evidence to support the claim that Core records contain sufficient information with regard to author, subject, and title entries. Although the mean values alone would appear to indicate some level of agreement among users that the Core records indeed contain sufficient author, subject, and title entries, the results of the t-test do not support this conclusion. The t-test also shows that for the remaining user task, users may or may not believe that Core level records provide insufficient information for them to select a particular version of an item they are seeking. Further research is needed in this area.

Table 8B
Do Full Records Contain Sufficient Information?

Question	Total N	Mean	SD	df	t	Sig.*
You have a citation for this item. This record contains sufficient information for you to find the item in a library catalog (*Find*)	147	4.5102	.8865	146	6.978	.000*
This record contains sufficient information for you to identify this item from among a group of like items in a library catalog (*Identify*)	147	4.3673	.9586	146	4.646	.000*
You are seeking a particular version of this item. This record contains sufficient information for you to distinguish whether or not this is the item you are seeking (*Select*)	147	3.8571	1.2163	146	1.424	.0785
This record contains sufficient author entries	147	4.3197	1.1164	146	3.472	.0005*
This record contains sufficient title entries	147	4.2109	1.2288	146	2.081	.0195*
This record contains sufficient subject headings	147	4.3333	1.0425	146	3.877	.000*

*Single sample one-tailed t-test, p ≤ .05 (when p=.000, actual p < .00025 for one-tailed)

Table 8B shows that for the Full record, the null hypothesis can be rejected for five of the six questionnaire items. Thus users appear to agree that the Full-level records provide sufficient information to support two of the three user tasks (*find* and *identify*) and contain sufficient author, title and subject entries. The null hypothesis cannot be rejected for the remaining user task, *select*. In other words, while the mean for this item suggests that users find Full records insufficient for the purpose of selecting a particular version on an item they are seeking, the data do not support this conclusion with statistical significance.

To summarize, users seem satisfied with the sufficiency of author, title and subject entries for Full records. For Core records, they appear to be satisfied with the sufficiency of author and title entries, but somewhat less than satisfied with respect to sufficiency of subject headings. However, in the absence of further data, no definitive conclusions can be drawn with respect to user perceptions of sufficiency of these elements for Core records.

Users appear to believe that both the Core and the Full level records provide sufficient information to find the item in the library catalog. Data also suggest that users believe both Core and Full records provide sufficient information to identify an item among a group of like items in

the library catalog. With respect to the remaining user task, *select*, users do not necessarily believe that either the Core (t=.673, df=146, p=.251, one-tailed) or the Full record (t=1.424, df=146, p=.0785, one-tailed) provide sufficient information to enable them to distinguish versions of an item. Further research is needed in this area.

B. Difference in Questionnaire Response By User Group

As with the individual data elements in each record set, the researchers hypothesized that there would be significant differences in the ranking of questionnaire items by user groups. In order to test this hypothesis, a one-way ANOVA was performed on each of the twelve items in the Full and Core record questionnaires. For each of the twelve tests, the null hypothesis stated that there were no significant differences across user groups in the ranking of the item in question. A Tukey test was run post hoc to discover between which of the pairs of user groups (faculty vs. undergraduates, graduates vs. undergraduates, and faculty vs. graduates) the difference in means occurred.

Table 9A
Core Questionnaire by User Group

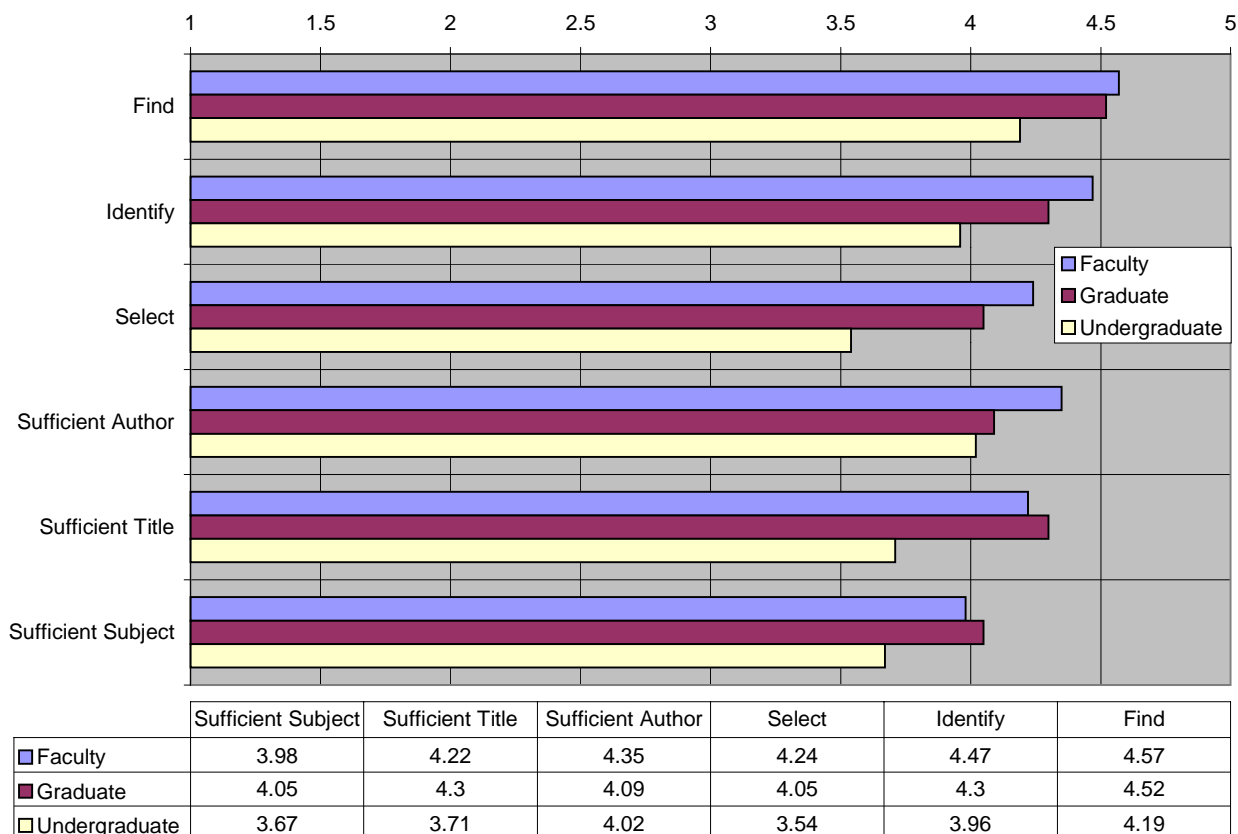|	Sufficient Subject	Sufficient Title	Sufficient Author	Select	Identify	Find
Faculty	3.98	4.22	4.35	4.24	4.47	4.57
Graduate	4.05	4.3	4.09	4.05	4.3	4.52
Undergraduate	3.67	3.71	4.02	3.54	3.96	4.19

Table 9A shows the mean responses for each user group for the Core questionnaire items.[13] Table 9B shows the significant differences in response for these items, as shown by the ANOVA

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[13] For full statistical information, see Tables 9A1-9A3 in Appendix E.

and Tukey.   For the Core questionnaire, there were three items for which users responded with significant differences according to user group. For the questionnaire items corresponding to the user tasks *identify* and *select*, and for the sufficiency of title information, the null hypothesis is rejected. Undergraduates were significantly less satisfied with the ability of Core records to provide sufficient information for identifying an item among a group of like items than were faculty. Undergraduates were also significantly less satisfied than faculty with regard to the ability of Core records to provide sufficient information for users to distinguish a particular version. Finally, undergraduates were significantly less satisfied with the sufficiency of title entries in Core records than were graduate students. With respect to the remainder of the Core questionnaire items, there were no significant differences in response. Users were in agreement on their perceptions of the sufficiency of the Core record for the remaining elements.

Table 9B
Significant Differences Between Users' Responses On Core Questionnaire

Question		ANOVA						Tukey
Question	**Groups**	**df**	**Sum of Squares**	**Mean of Squares**	**F**	**Sig.**		**Subjects/Sig.****
This record contains sufficient information for you to identify this item from among a group of like items in a library catalog (*Identify*)	Between Within Total	2 144 146	6.879 155.788 162.667	3.439 1.082	3.179	.045*		Faculty vs. Undergraduate (p=.035**)
You are seeking a particular version of this item. This record contains sufficient information for you to distinguish whether or not this is the item you are seeking (*Select*)	Between Within Total	2 144 146	13.311 206.009 219.320	6.656 1.431	4.652	.011*		Faculty vs. Undergraduate (p=.009**)
This record contains sufficient title entries	Between Within Total	2 144 146	9.989 212.460 222.449	4.995 1.475	3.385	.037*		Graduate vs. Undergraduate (p=.050**)

*One-way ANOVA, p ≤ .05 ** Tukey, p ≤ .05

Table 9C
Full Questionnaire By User Group

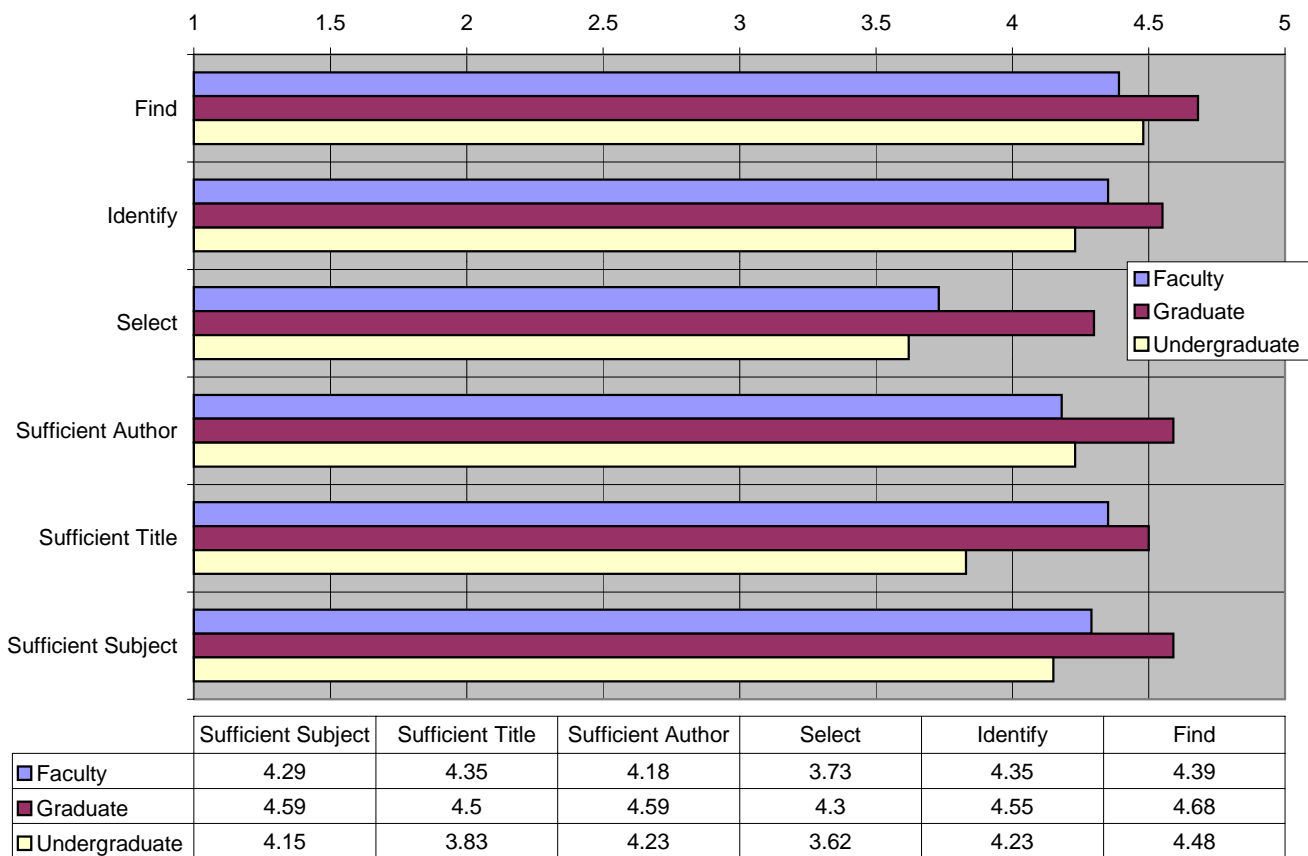|	Sufficient Subject	Sufficient Title	Sufficient Author	Select	Identify	Find
Faculty	4.29	4.35	4.18	3.73	4.35	4.39
Graduate	4.59	4.5	4.59	4.3	4.55	4.68
Undergraduate	4.15	3.83	4.23	3.62	4.23	4.48

Table 9C shows mean responses by user group for the Full questionnaire, and Table 9D shows the significant differences in response as determined by the ANOVA and Tukey tests.[14] With the exception of two elements, users agreed on their perceptions of the sufficiency of information in the Full record. For the questionnaire item corresponding to the user task, *select*, and for the sufficiency of title entries, the null hypothesis is rejected. There are significant differences in response between graduate students and undergraduates for these two elements. Undergraduates were significantly less satisfied than graduate students with the ability of the Full record to allow them to select a particular version of an item. Undergraduates were also significantly less satisfied with the sufficiency of title entries in the Full record than were graduate students.

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[14] For full statistical information, see Tables 9C1-9C3 in Appendix E.

Table 9D
Significant Differences Between Users' Responses On Full Questionnaire

Question		ANOVA						Tukey
	Groups	df	Sum of Squares	Mean of Squares	F		Sig.	Subjects/Sig.**
You are seeking a particular version of this item. This record contains sufficient information for you to distinguish whether or not this is the item you are seeking (*Select*)	Between Within Total	2 144 146	12.376 203.624 216.000	6.188 1.414	4.376		.014*	Graduate vs. Undergraduate (p=.014**)
This record contains sufficient title entries	Between Within Total	2 144 146	12.373 208.089 220.463	6.187 1.445	4.281		.016*	Graduate vs. Undergraduate (p=.017**)

*One-way ANOVA, p ≤ .05 ** Tukey, p ≤ .05

C. Comparison Of The Usefulness Of Core Vs. Full Records

The next research question compares user responses for Core and Full records, considering whether users viewed either type of record as more useful than the other. After the six pairs of composite scores (a Core score and a Full score for each of the six questionnaire items) were obtained as described above, a one-tailed paired t-test was run for each questionnaire item, comparing the composite Core and Full responses to that item and testing the following null hypothesis:

H_o With regard to this questionnaire item, users do not perceive Full level records to be more useful than Core level records

The intent of these tests is to address the concerns expressed in the cataloging community about the Core Record Standard. The fact that the Core record contains fewer data elements than the Full record has been controversial. When catalogers express reservations about the use of the Core record, the assumption is that the Full-level record is preferable since it contains more data. Table 10 shows the comparison of Full vs. Core records.

Table 10
Usefulness of Core vs. Full Record As Viewed By All Users

Question	Record	Total N	Mean	SD	df	t	Sig.*
You have a citation for this item. This record contains sufficient information for you to find the item in a library catalog (*Find*)	Core Full	147	4.4218 4.5102	.9646 .8865	146	1.297	.0985
This record contains sufficient information for you to identify this item from among a group of like items in a library catalog (*Identify*)	Core Full	147	4.2381 4.3673	1.06 .9586	146	1.513	.066
You are seeking a particular version of this item. This record contains sufficient information for you to distinguish whether or not this is the item you are seeking (*Select*)	Core Full	147	3.9320 3.8571	1.2256 1.2163	146	.600	.275
This record contains sufficient author entries	Core Full	147	4.1565 4.3197	1.1569 1.1164	146	1.557	.061
This record contains sufficient title entries	Core Full	147	4.0612 4.2109	1.2344 1.2288	146	1.659	.0495*
This record contains sufficient subject headings	Core Full	147	3.8912 4.3333	1.2114 1.0425	146	4.031	.000*

*Paired one-tailed t-test, p ≤ .05 (If p=.000, then p < .00025 for one-tailed)

Table 10 shows that only for title entries and subject headings can the null hypothesis be rejected, indicating that users found the Full record more useful than the Core record with regard to the sufficiency of these two data elements. However, there is not enough statistical evidence from this pilot study to conclude that users find the Full record more useful than the Core record with regard to any of the following:

- Sufficient information to find the item in the library catalog (**FRBR** user task *find*),
- Sufficient information to identify the item among a group of like items in the library catalog (**FRBR** user task *identify*),
- Seeking a particular version and needing to distinguish whether or not the item is the one being sought, (**FRBR** user task *select*), or
- Sufficient author entries.

In these four areas, further research is needed before definitive conclusions can be drawn about the ability of the Core record to meet user's needs in these areas.

D. Desirable Elements for Record Enhancements for Full or Core Records

The final portion of the questionnaire asked users to think about elements that may not have been included on the record but may have been useful. Users ranked the usefulness of these elements with the same scale that was used for the data elements on the card sets:
1=definitely not needed, 2=somewhat useful, 3=no opinion, 4= useful, 5=absolutely essential

Data for these questions from all questionnaires, whether Core or Full, was combined in Excel and imported in SPSS. The means for all were computed in order to get a general sense of users' perceptions of the usefulness of these record elements. The elements are listed in Table 11 by descending means in order from most useful to least useful.

Table 11
Items Not Included in Record That Would Have Been Useful

Record Element	N	Min.	Max.	Mean	SD
Summary information	292	1	5	3.92	1.0539
Titles of additional related works	292	1	5	3.72	1.0632
Links to related Web resources	295	1	5	3.72	1.2278
Abstracts	289	1	5	3.59	1.2442
Contents notes	286	1	5	3.55	1.0903
Links to table of contents on Web	290	1	5	3.38	1.2030
Reviews	292	1	5	3.21	1.2873
Bibliography notes	285	1	5	2.99	1.2615
Notes on additional formats	280	1	5	2.51	1.2700
Filmography notes	288	1	5	2.14	1.1300
Discography notes	290	1	5	2.07	1.1368

Of the additional elements listed, summary information was ranked as most useful with a mean of 3.92. None of the enhancements were ranked at or above 4.0. Titles of additional related works, links to related Web resources, abstracts, and contents notes all scored moderately well. Many of the additional elements listed are either items found in present OPACs provided by vendors (summaries, contents notes, reviews) or are frequently added by catalogers (links to related Web resources). The results in Table 11 were not as strong as had been anticipated. Some of the lower than expected means may be the result of users' unfamiliarity with data elements such as filmographies and discographies.

The researchers have been particularly interested in the effect that the availability of sophisticated enhancements on the Web may have on users' expectations for library catalog records. Users were fairly neutral about reviews, an element that is commonly available on websites such as Amazon, and has been regarded as a desirable innovation in the world of e-commerce. Given the mean levels of usefulness as ranked by users in this pilot study, it is difficult to draw any definite conclusions. Clearly, more data are needed in this area of study.

CONCLUSION

Findings

The pilot study set out to answer a number of research questions. A summary of the findings follows.

1. **What are the most important data elements in Core and Full records as ranked by all users?**

Table 1 shows that for the Core record, the following elements were ranked by all users as most useful, with means greater than or equal to 4.0 (useful to essential):
- Title (4.68)
- Primary Author or Editor (4.46)
- LC call number (4.08)

Table 2 indicates that for Full record, the following elements were ranked as most useful by all users, with means greater than or equal to 4.0 (useful to essential):
- Title (4.69)
- Primary author or editor (4.57)
- Added author or editor (4.27)
- Series (4.08)
- LC Call No. (4.07)

2. **Did users agree on a definable set of most essential elements?**

For the most part, users in all three groups agreed upon the following set of elements as most useful across both record sets:
- Title
- Primary author or editor
- Added author or editor
- Series
- LC Call No.

However, the results of a one-way ANOVA and post-hoc Scheffe test revealed significant differences in the rankings of two of the essential elements according to user group. For both the Core and the Full record, undergraduates viewed the LC call number as significantly less useful than did faculty. (Table 3, mean of 3.6 for undergraduate Core vs. mean of 4.53 for faculty Core; Table 5, undergraduates Full mean 3.69 vs. Faculty, 4.35.) For the Core record, undergraduates also viewed the title as significantly less useful than did the Faculty, with a mean of 4.54 for undergraduates vs. 4.86 for Faculty (Table 3). It is difficult to interpret this finding. It could mean that undergraduates viewed the title as a less significant element in general or it could indicate dissatisfaction with the title. This finding may have less practical significance, as the mean ranking by undergraduates as a group is still well above 4.0, the value denoting a "useful" element in the context of the study.

3. **How do the elements defined by the Core record standard compare to those elements ranked as most essential by users?**

The set of data elements encompassed by the Core Record Standard appears to meet users' needs quite well when compared with the set of data elements identified by users as most essential. The Core Record Standard mandates the use all of the elements ranked by users as most useful.

4. Did users view either the Core or the Full level record as more useful than the other?

Results of a one-tailed paired t-test showed that users were as satisfied with Core records as they were with Full except in two areas. The t-test directly compared responses to the Core questionnaire to that of the Full questionnaire, and indicated that users found the Full record to be more useful than the Core record with regard to the sufficiency of both title entries and subject headings (Table 10). However, there is not enough statistical evidence from this pilot study to conclude that users find the Full record more useful than the Core record with regard to any of the following:

- sufficient information to find the item in the library catalog (**FRBR** user task *find*),
- sufficient information to identify the item among a group of like items in the library catalog (**FRBR** user task *identify*),
- seeking a particular version and needing to distinguish whether or not the item is the one being sought, (**FRBR** user task *select*), or
- sufficient author entries

Further research is needed before definitive conclusions can be drawn about the ability of the Core record to meet users' needs in these four areas.

5. Did users find that the Core record contained sufficient
   - **Author entries?**
   - **Title entries?**
   - **Subject headings?**

Results in Tables 8A and 8B appear to indicate that the information provided in the Core record is not uniformly sufficient in the eyes of users. These tables examine the sufficiency of elements in both record sets in and of themselves, in isolation from each other. Separate single-sample one-tailed t-tests were performed on the corresponding composite Core and Full questionnaire datasets to obtain this data. There is not enough evidence to support the claim that Core records contain sufficient information with regard to author, subject, and title entries from the data obtained in the pilot study. From the evidence of mean rankings alone, users would appear to be somewhat satisfied with the sufficiency of author and title entries (means of 4.1565 for author, 4.0612 for title), but somewhat less than satisfied with respect to sufficiency of subject headings (mean of 3.8912) in Core records (Table 8A). However, in the absence of further data, no definitive conclusions can be drawn with respect to user perceptions of sufficiency of these elements for Core records.

Users do, however, appear to agree that Full records provide sufficient author, title, and subject headings (Table 8B).

6. Were there differences in response between faculty, graduate students and undergraduates with respect to:

A. Usefulness of data elements?

Users in all three groups generally agreed upon the usefulness of data elements in Full and Core records. However, a one-way ANOVA and post-hoc Scheffe test revealed that for the LC call number, the ISBN, the title and the subject headings, there were significant statistical differences in level of perceived usefulness across user groups (Tables 3-6). Undergraduates viewed the LC call number and ISBN as significantly less useful than did faculty for both the Core (undergraduate means 3.6 and 1.95, respectively; faculty means 4.53 and 2.75, respectively) and Full record (undergraduate means, 3.69 and 2.14, respectively; faculty means 4.35 and 2.73, respectively). For the Core record, undergraduates found the ISBN to be less useful than did graduate students (undergraduate mean, 1.95; graduate mean, 2.57). Undergraduates also viewed the title in Core records as significantly less useful than did the Faculty (undergraduate mean, 4.54; faculty mean, 4.86). This finding may have limited practical significance as the mean ranking by undergraduates as a group is still well above 4.0, the mean value defining a "useful" element for this study. The most interesting finding, however, is that undergraduates found subject headings for Core records to be significantly more useful than did either faculty or graduate students (undergraduate mean, 3.88; faculty mean, 3.52; graduate mean, 3.67).

B. Sufficiency of information in the Core records for
- **Author entries?**
- **Title entries?**
- **Subject headings?**

With the exception of title entries, there was no statistically significant difference by user group in the level of perceived sufficiency. A one-way ANOVA and post-hoc Tukey tests were performed on the questionnaire data to determine if significant differences in questionnaire response occurred across user groups (Tables 9A and 9B). Statistically significant differences in response between user groups were found only with regard to undergraduates' satisfaction with the sufficiency of title entries in both Core and Full records (Tables 9A and 9B). In both cases, undergraduates were significantly less satisfied than were graduate students.

7. **How well did Core and Full records support the user tasks *find, identify* and *select* as defined in the document, *Functional Requirements for Bibliographic Records*?**

Results of statistical tests (see Table 8A) indicate that users appear to believe that Core records contain sufficient information to allow them to find the items in a library catalog. They also indicate that Core records contain enough information for them to identify an item from among a group of like items in a catalog. Test results further show that users believe Full-level records provide sufficient information to support the same tasks (*find* and *identify*) (Table 8B). However, users did not necessarily believe that either the Core or the Full record provides sufficient information to accomplish the FRBR user task *select*, to distinguish a particular version of an item that is sought.

Additionally, a one-way ANOVA and post-hoc Tukey tests indicate some significant differences in response according to user groups (Tables 9A and 9C). Undergraduates were significantly less satisfied than were faculty with the ability of both Core and Full records to provide sufficient information for identifying an item among a group of like items. For the

FRBR task *select*, undergraduates were significantly less satisfied than faculty with regard to the ability of Core records to provide sufficient information to distinguish a particular version. They were significantly less satisfied than graduate students with the ability of the Full record to allow them to select a particular version of an item.

Discussion And Implications Of Findings

The next section addresses implications that the pilot study may have for the development of the Core record. It is important to bear in mind the uncertainties associated with generalizing to all users the conclusions of this relatively small study (75 users).

A. User Perception of Elements in the Core Record

In general, the set of required elements in the Core record meets users' needs quite well. All elements that users identified as most useful (with means greater than or equal to 4.0) are required elements in the Core Record Standard. There was little difference in users' ranking of the usefulness of record elements for Core versus Full records. The Core Bibliographic Record for Books is quite similar to the Full record for books.

However, what is much more interesting about these findings (see Tables 1 and 2) is that users ranked many data elements as less useful than would the library community. For example, users ranked elements such as imprint and edition as much less useful than expected (means of 3.81 and 3.36, respectively, for Core; 3.9 for imprint for Full), somewhere between "no opinion" and "somewhat useful." Librarians would consider both elements to be absolutely essential (5). Both record elements are clearly needed in order to distinguish works at the level of the expression or the manifestation.

Furthermore, the pilot study showed no evidence that users believe either the Core or the Full record provides sufficient information to accomplish the **FRBR** user task *select*, i.e., to distinguish a particular version of an item that is sought. In other words, users ranked the very record elements that would allow them to accomplish this user task as less important than other elements, but they seemed at the same time to express dissatisfaction with the ability of records to support the user task *select*.

These findings suggest that the users lack a clear understanding of what constitutes bibliographically distinct entities. Users appear to understand neither the functions of the various elements of bibliographic records nor how to interpret them. This suggests that users need a record structure that is easier to use and to understand than the current structure, yet one that still supports sophisticated user tasks. Further study is needed in this area.

Results of the pilot study indicate that users perceived subject headings, with a mean of 3.69 for Core and 3.53 for Full, to be less useful than several other record elements. These means fall well below the 4.0 level that designates a "useful" element in the context of this study. There seems to be anecdotal evidence in the library community that users perform subject searches with less frequency than other OPAC searches, such as title and keyword. The pilot study's finding is consistent with that observation. The reason for the relatively low means for subject

headings in both record sets could be that users tend to rely more heavily on known item searching than on subject searching.[15]

Not all user groups viewed the usefulness of subject headings similarly. Undergraduates found them to be significantly more useful for Core records than did faculty. Faculty and graduate students are more likely to perform known item searching, whereas undergraduates are less familiar with subject areas and may do more subject searching than those in the other groups.

Undergraduates were also significantly less satisfied with title access for Core records than were faculty. This finding is difficult to interpret. On a practical level, it may have limited significance, as undergraduates clearly still perceived the title as useful to essential, with a mean of 4.53. Several interpretations are possible. Perhaps undergraduates found the title as an element or data category to be less useful than did faculty. Possibly, they were simply dissatisfied with the sufficiency of title access on the Core record. Consistent with the earlier finding regarding the usefulness of subject headings for undergraduates is the possibility that they find title searches less useful. Further research is needed here.

Of further interest is the fact that with respect to the sufficiency of title access users were satisfied with Full records but not necessarily with Core records. Contents notes were included on Full records but not Core in the pilot study. The Full record contents note had a mean of 3.87, which is close to mean value 4.0 that identifies a "useful" element. It is possible that users were happier with the sufficiency of title access on the Full record because it included a contents note. One final observation concerning titles is that users did not consider either series or uniform titles to be particularly useful elements (only on the Full record was series ranked as useful). Again this suggests that users may not have a clear understanding of the functions of title elements.

Undergraduates found the LC call number on Core and Full records significantly less useful than did faculty, with means of 3.6 for Core and 3.69 for Full. The other users considered the LC call number one of the most useful elements. Perhaps undergraduates do not understand the relationship of the LC call number in the catalog record to the item's shelf location as well as do graduate students and faculty.

B. User Satisfaction with Core Records Overall

Users seemed quite satisfied with the set of data elements included in the Core Record for Books. Users were also as satisfied with the Core record overall as with the Full except with regard to title and subject access. Results of the pilot study indicate that users found the Full record to be more useful than the Core record with regard to the sufficiency of both title entries and subject headings (Tables 10, 8A, 8B). Statistical analysis of users' perceptions of the Full record in and of itself showed them to be satisfied with the sufficiency of author, title, and subject entries. However, the same could not be said with statistical certainty about their perceptions of the sufficiency of author, title and subject headings in the Core record (Table 8B).

For monographs, the Core and the Full records are quite similar. The main areas of difference include the subject headings, added entries and notes typically used for each record type. For the Core record, the decision of whether to add a note, an added entry, or a subject heading is very

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[15] Charles Pennell. Oct. 1, 2001. Personal communication.

much dependent upon the cataloger's judgement. In particular, the area of subject analysis in the Core has been somewhat controversial. David Banush's recent study on practitioner perspective of the Core revealed that misunderstandings about the requirements for subject headings in the Core persist.[16] The Core requires that every record must have at least one or two subject headings. The Core does not limit the number of subject headings permitted on a record: this is a minimum, not a maximum, requirement. Catalogers and cataloging agencies may add subject headings to Core records as they judge necessary.

The results of the pilot study indicate that users are satisfied with the sufficiency of subject headings on Full records in and of themselves (Table 8B). Users found Full records to be more useful than Core records with regard to sufficiency of subject headings (Table 10). But as to user satisfaction with the sufficiency of subject headings in the Core in and of itself, no conclusions can be drawn with statistical certainty from this study (Table 8A). It appears that users might prefer to see more subject headings in Core records. However, further research in this area is needed before definitive conclusions can be drawn.

Additionally, users indicated a preference for Full records over Core with respect to the sufficiency of title entries (Table 10). This finding is difficult to interpret, since users did not seem to find series titles (for Core records) or uniform titles particularly useful (Table 3, Table 5). Users seemed reasonably positive with regard to the usefulness of contents notes (mean of 3.87), which are not required for Core records for single volume works. The use of contents notes in Core records could be a means of improving title access to these records. This is an area where further research is needed. Overall, users were very satisfied with the Full record, but somewhat less satisfied with the Core.

C. Does One Size Fit All? User Groups and the Core

The pilot study revealed statistically significant differences in response between user groups in a number of areas (Tables 4, 6, 9B, 9D). Both undergraduates and faculty seemed to have special needs for catalog records. Undergraduates were much less satisfied with records of either type than were graduate students or faculty. They seemed to perceive record elements (e.g., the title and the LC call number) as less useful than other users. However, subject headings were significantly more useful to undergraduates than to other users.

On the other hand, faculty members found nearly all record elements to be more useful than did other users. Faculty seemed to be interested in gleaning as much information from records as possible; they also seemed to have a much clearer understanding of what information is needed to distinguish editions. One faculty member commented, with respect to the Orange Core record:

> "Reprints or revised or subsequent editions could not be identified from
> the citation. Nor could a reprinted work with a scholarly introduction."

Another stated, for the Green Core record:

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[16] David Banush, *BIBCO Core Record Study: Final Report*, 2001. Available online at
http://lcweb.loc.gov/catdir/pcc/bibco/coretudefinal.html

"It might be useful to know if other editions exist, especially those with editors and an introduction."

These comments raise an interesting point. Traditionally, the function of the catalog has been to inform users of information that was held by a specific library or to which a specific library provided access for its users. However, in the pilot study, three faculty members indicated a desire to know, from the catalog, not only which editions of a work the library holds, but also which editions of a work exist.[17] These faculty members would like to see the catalog function, essentially, as a universal bibliography rather than as a finding aid for a specific collection.

The differences between user groups identified by the pilot study raises the question of how well Core records are able to meet the needs of disparate user groups. Enhancements to Core records may be needed for certain collections, types of materials or subject areas in order more effectively to meet the needs of various user groups. More research is needed in this area.

D. Record Quality and the Core Record

A key question about the Core Record for practitioners and users alike is what constitutes a quality bibliographic record. David Banush's study attempted to explore this question from the perspective of catalogers and managers.[18] The pilot study has attempted to address this question from the user's perspective, through a consideration of a number of key issues. The study has examined the constitution of data elements in the Core: does the Core include the elements users identify as most useful? It has examined the question of sufficiency of data: Does the Core provide enough information to meet the needs of users? The study has also tried to assess the functionality of the Core: how well does it support common user tasks such as find, identify, and select? The pilot study has provided a number of insights into the definition of "quality" bibliographic records from the user's perspective. Data from this study suggest that a quality record from the user's perspective includes a comprehensive set of data elements, a high level of functionality with respect to the selecting task, and a simpler structure. However, further research is needed in order to arrive at a more conclusive answer to the question of record quality from the user's point of view.

E. Research Methodology

The researchers feel that the methodology used in the pilot study was fairly successful, yielding useful data. More work is needed in refining the methodology. One area that should be revised is the scales used to rank the data in the card sets and questionnaires. The scales were designed in consultation with a faculty member of the SMSU Department of Psychology. However, the researchers found that placing the value "no opinion" in the middle of the scales made it difficult to interpret responses. "No opinion" should instead be placed outside the scales.

Another modification suggested by members of the PCC Standards Committee at the ALA Annual meeting in San Francisco, June 2001 would be to show users an entire record rather than to use a separate card for each data element. This is an option that could be pursued if the study were to be expanded.

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[17] Two faculty respondents provided written comments; a third commented verbally at length with regard to this topic.

[18] David Banush, *BIBCO Core Record Study: Final Report*, 2001. Available online at http://lcweb.loc.gov/catdir/pcc/bibco/coretudefinal.html

The questionnaire yielded the most useful data obtained in the pilot study, as it addressed the information in Core and Full records as a whole. The question of sufficiency of data—what is "enough" to meet the needs of users?—is central to understanding the impact of the Core on users. It is also quite difficult to design a research methodology that addresses the user tasks effectively, the chief difficulty being that these user tasks are not actually performed discretely in a real-life situation. The study could be improved through further development of the questionnaire, particularly with respect to the user tasks.

RECOMMENDATIONS

The pilot study is based upon the perceptions of 75 catalog users who examined four catalog records, an admittedly small sample. The recommendations below are offered for the committee's consideration based upon the available data. While users responded quite positively to the Core, the pilot study highlighted some areas of concern.

1. As is the case with much research, the pilot study raised more questions than it answered. Further research is needed on the impact of the Core record on users. The pilot study could be expanded to a larger and more diverse group of users, from a variety of geographic locations and sizes of institution, in order to obtain further data. Research is needed in a number of areas, including:
    - ability of Core records to support user tasks
    - sufficiency of Core records with respect to author, title, and subject entries
    - user understanding of the functions of record elements
    - ability of the Core to meet the needs of various user populations
    - benefit of authority work in Core records to users

    Further work is needed to determine what constitutes a quality bibliographic record from the user's perspective, and to assess how well the Core record meets that definition. In many areas, the data obtained from the pilot study were not sufficient to answer these questions conclusively; however, the study contained useful methodology that could be refined and expanded.

Two key areas where further research is needed are highlighted in recommendations 2 and 3. These recommendations address the areas of the Core where users were less satisfied with Core records than with Full. Recommendations 2 and 3 are offered on the basis of data from the questionnaires, specifically, findings in Tables 8A, 8B, and 10. The pilot study found that users were as satisfied with Core records as with Full with the exception of the sufficiency of subject and title entries. In Table 10, user satisfaction with the sufficiency of information in Core records was compared directly with that in Full. The data showed that users clearly preferred Full records to Core with regard to the sufficiency of subject and title entries. In other words, they found that Core records were less useful than Full with regard to the sufficiency of these elements.

Tables 8A and 8B examine the sufficiency of data elements in Core and Full records in and of themselves, considered in isolation from one another. Table 8B shows that users felt Full records provide sufficient author and title entries. Table 8A shows that there are not sufficient

data to support the claim that users found the same to be true for Core records. It may be the case that they considered Core records sufficient in these areas, but the available data do not support this conclusion. More research is needed here.

2. The area of sufficiency of title access to Core records needs further research. A specific question to consider is whether it is advisable to expand the Core Record for Monographs to include contents notes for single volume works. Tables 8A and 8B show that users were satisfied with the sufficiency of title entries on Full records but the data were inconclusive for Core records. The main difference in title access between the Core and Full records in the study was the contents notes. Contents notes (with mean ranking of 3.87) were ranked close to the mean value 4.0 that identifies a "useful" element (Table 2). Currently, contents notes are required in the Core only for multipart items with separate titles. The addition of contents notes to the Core record for single volume works as well might improve user satisfaction with the sufficiency of title access to Core records.

3. The sufficiency of subject access to Core records from the user's perspective is another area where further research is needed. The pilot study indicated that users found Full records more useful than Core with respect to the sufficiency of subject headings (Tables 8B, 10). The study also showed that subject headings for Core records were significantly more important to undergraduate users than to the other user groups (Tables 3 and 4). These findings must be weighed against the fact that subject headings were not ranked by users as a "useful" element in the context of the study, since the mean levels for both record types fell below 4.0 (see Tables 1 and 2). However, users clearly preferred Full records to Core with regard to subject access (Table 10). This seems to suggest that users might prefer to see more subject headings on Core records since they appear to believe that Full records contained "enough" subject headings (Table 8B). Improving subject access to Core records may address the needs of a greater number of users.

    Furthermore, there is a widespread misconception in the cataloging community that the Core limits the number of subject headings that can be included on a record. Catalogers and cataloging agencies need to be made more aware that the Core is not a ceiling, but a floor, and that core records can be enhanced to meet local needs. The idea that Core records are dynamic needs to be emphasized.

    The researchers offer two suggestions for improving subject access to Core records.

a. Increase the awareness of the cataloging community of the Core as a dynamic record type. Encourage cataloging agencies to consider whether the development of local policies for the enhancement of Core records in the area of subject analysis is appropriate for their user groups.

b. Clarify the wording of footnote 10 in the Core Bibliographic Record for Books (http://www.loc.gov/catdir/pcc/corebook.html), which states:
    "If appropriate, assign at least one or two subject headings from an established thesaurus or subject heading system recognized by the MARC 21 Format."
    Consider revising the footnote to read:
    "If appropriate, assign at least two subject headings from an established thesaurus or subject heading system recognized by the MARC 21 Format."

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Revised and submitted 10/23/01

> 18 700 1 Rickert, Ellen Wood, $d 1956- ¶

Purple Full Record

OCLC: 39765176 Rec stat: c Entered: 19980820
Replaced: 20010301 Used: 20010626
> Type: a ELvl: Srce: Audn: Ctrl: Lang: eng
BLvl: m Form: Conf: 0 Biog: MRec: Ctry: nyu
Cont: b GPub: LitF: 0 Indx: 1
Desc: a Ills: ab Fest: 0 DtSt: s Dates: 1999, ¶
> 1 010 98-42234 ¶
> 2 040 DLC $c DLC $d VVC $d EL$ ¶
> 3 020 $z 0809087899 (alk. paper)¶
> 4 041 1 eng $h por ¶ > 5 043 s-bl--- ¶
> 6 050 00 F2699.A1 $b S3313 1999 ¶
> 7 082 00 305.8/00981 $2 21 ¶
> 8 090 $b ¶
> 9 049 MOUA ¶
> 10 100 1 Schwarcz, Lilia Moritz. ¶
> 11 240 10 Espetáculo das raças. $l English ¶
> 12 245 14 The spectacle of the races : $b scientists, institutions, and the race question in Brazil, 1870-1930 / $c Lilia Moritz Schwarcz ; translated by Leland Guyer. ¶
> 13 260 New York : $b Hill and Wang, $c 1999. ¶
> 14 300 ix, 358 p. : $b ill., maps ; $c 22 cm. ¶
> 15 504 Includes bibliographical references (p. [337]-349) and index. ¶
> 16 505 0 Among "men of science" -- Racial doctrines in the nineteenth century: a history of "differences and discrimination" -- Ethnographic museums in Brazil": "clams are clans, and mollusks are men as well" -- Historical and geographical institutes: "guardians of the official story" -- Schools of law, or the nation's chosen -- Schools of medicine, or how to heal an ailing nation -- Between the poison and the antidote: some final thoughts. ¶
> 17 651 0 Brazil $x Race relations. ¶
> 18 650 0 Miscegenation $z Brazil $x History. ¶
> 19 650 0 Associations, institutions, etc $z Brazil $x Sociological aspects.¶
> 20 650 0 Decision-making, Group $z Brazil $x History. ¶
> 21 650 0 Race discrimination $z Brazil $x History. ¶
> 22 650 4 Mestizaje $z Brasil $x Historia. ¶
> 23 650 4 Asociaciones, instituciones, etc. $z Brasil $x Aspectos sociológicos.¶
> 24 650 4 Discriminación racial $z Brasil $x Historia. ¶

Yellow Full Record

OCLC: 27814018 Rec stat: c
Entered: 19930311 Replaced: 19950618 Used: 20010529
> Type: a ELvl: Srce: Audn: Ctrl: Lang: eng
BLvl: m Form: Conf: 0 Biog: MRec: Ctry: miu
Cont: b GPub: LitF: 0 Indx: 1
Desc: a Ills: b Fest: 0 DtSt: s Dates: 1993, ¶
> 1 010 93-16997 ¶
> 2 040 DLC $c DLC $d PMC ¶
> 3 020 0472095277 ¶
> 4 020 0472065270 (pbk.) ¶
> 5 043 e-gx--- ¶
> 6 050 00 JN3972.A58 $b F76 1993 ¶
> 7 082 00 320.943 $2 20 ¶
> 8 090 $b ¶
> 9 049 MOUA ¶
> 10 245 00 From Bundesrepublik to Deutschland : $b German politics after unification / $c edited by Michael

G. Huelshoff, Andrei S. Markovits, and Simon Reich. ¶

> 11 260 Ann Arbor : $b University of Michigan Press, $c c1993. ¶

> 12 300 x, 396 p. : $b 1 map ; $c 24 cm. ¶

> 13 440 0 Social history, popular culture, and politics in Germany ¶

> 14 504 Includes bibliographical references and index. ¶

> 15 [1] 505 0 The study of Germany in comparative politics / Jutta A. Helm --Political attitudes and behavior in Germany : the making of a democratic society / Manfred Kuechler -- From social market to mesocorporatism to European integration : the politics of German economic policy / Christopher S. Allen -- Transforming the East German economy : shock without therapy / Thomas A. Baylis -- German economic integration : the case for optimism / Irwin L. Collier, Jr. -- Women in West Germany from 1945 to the present / Hanna Schissler -- The new women's movement / Andrei S. Markovits and Philip S. Gorski -- Old troubles¶

> 15 [2] 505 0 and new uncertainties : women and politics in united Germany / Christiane Lemke -- Reproduction and reunification : the politics of abortion in united Germany / Jeremiah M. Riemer. ¶

> 16 [1] 505 0 Explaining inter-German cooperation in the 1980s / A. James McAdams -- The collapse of the German Democratic Republic and its unification with the Federal Republic of Germany, 1989-90 / Arthur M. Handhardt, Jr. -- The "black-brown hazelnut" in a bigger Germany : the rise of a radical right as a structural feature / John D. Ely -- Should Europe fear the Germans? / Andrei S. Markovits and Simon Reich -- Germany's future and its unmastered past / Moishe Postone -- Germany and European integration : understanding the relationship / Michael G. Huelshoff -- German security policy and the future European security order / James Sperling -- Continuity, change, and the study of Germany in the new Europe / Simon Reich. ¶

> 17 651 0 Germany $x Politics and government $y 1990- ¶

> 18 651 0 Germany $x Social conditions $y 1990- ¶

> 19 651 0 Germany $x Economic conditions $y 1990- ¶

> 20 700 1 Huelshoff, Michael G. ¶

> 21 700 1 Markovits, Andrei S. ¶

> 22 700 1 Reich, Simon, $d 1959- ¶

0807825883 (cloth : alk. paper) #___	0807849022 (pbk. : alk. paper) #___
HG9396 .H638 2001 #___	368.38/2/00973 #___
Hoffman, Beatrix Rebecca. #___	The wages of sickness : the politics of health insurance in progressive America / Beatrix Hoffman. #___
Chapel Hill : University of North Carolina Press, c2001. #___	xii, 261 p. : ill. ; 24 cm. #___

LIBRARY CORE RECORD STANDARD RESEARCH PROJECT

QUESTIONNAIRE

Please respond to the statements below using the following scale.   Please use the back of the sheet if additional space is needed.

1=strongly disagree 2=somewhat disagree 3=no opinion 4=somewhat agree 5=strongly agree

1. You have a citation for this item. This record contains sufficient information for you to find the item in a library catalog. _____
  Comments:

2. This record contains sufficient information for you to identify this item from among a group of like items in a library catalog. _____
  Comments:

3. You are seeking a particular version of this item. This record contains sufficient information for you to distinguish whether or not this is the item you are seeking. _____
  Comments:

4. This record contains sufficient author entries. _____
  Comments:

5. This record contains sufficient title entries. _____
  Comments:

6. This record contains sufficient subject headings. _____
  Comments:

Is there information not included in this record that would have been useful? Please rank the usefulness of the information below using the following scale:

1=definitely not needed 2=somewhat useful 3=no opinion 4=useful 5=absolutely essential

_____ Contents notes	_____ Reviews
_____ Summary information	_____ Abstracts
_____ Discography notes	_____ Titles of additional related works
_____ Filmography notes	_____ Links to related Web sources
_____ Bibliography notes	_____ Links to table of contents on
_____ Notes on additional formats	Web

Comments:

  Other (please list):

APPENDIX D

LIBRARY CORE RECORD STANDARD RESEARCH PROJECT

PARTICIPANT INSTRUCTIONS

I.   Please sign the consent form on the outside of your packet.

II.   You have been given 4 card packets that represent parts of 4 different library catalog records. You also have 4 questionnaires, 1 for each card packet, that we would like you to fill out. Each questionnaire is color coded to the color of the corresponding card packet.

For each packet of cards, we would like you to:
1) rank the information on the cards
2) fill out the questionnaire of the corresponding color

1. Please rank the usefulness of the information on each card in the packet according to the following scale:

1= definitely not needed
2= somewhat useful
3=no opinion
4= useful
5=absolutely essential

*If you do not understand the information on a card, please let us know.
We will be happy to answer any questions.

Please write your ranking on each card in the space provided in the lower right-hand corner.

2.   Please fill out the questionnaire of the corresponding color.

3.   When you are finished, place a rubber band around the card packet and go on to the next packet.

III. When you have finished ranking all of the cards in the 4 packets and have filled out all 4 questionnaires, please place them back in the envelope.

Additional Statistical Tables For Pilot Study

Table 3A Elements in Core Record Ranked by Faculty

Record Element	N	Min.	Max.	Mean	SD
Title	51	4	5	4.86	.3475
Primary Author or Editor	51	2	5	4.59	.8758
LC Call No.	51	2	5	4.53	.8798
Imprint	51	1	5	4.08	1.2140
Series	26	2	5	3.85	.9672
Edition	25	1	5	3.56	1.3565
Subject Headings	102	1	5	3.52	1.1495
Bibliography Note	51	1	5	3.18	1.4520
Physical Description	51	1	5	3.18	1.3958
DDC Call No.	51	1	5	3.12	1.4785
ISBN	102	1	5	2.75	1.6087

Table 3B
Elements in Core Record Ranked by Graduates

Record Element	N	Min.	Max.	Mean	SD
Title	46	2	5	4.65	.7369
Primary Author or Editor	46	1	5	4.41	1.0451
LC Call No.	46	1	5	4.13	1.3761
Edition	23	1	5	3.74	1.2869
Subject Headings	92	1	5	3.67	1.0389
Imprint	46	1	5	3.61	1.4217
Series	23	2	5	3.52	1.1627
Physical Description	46	1	5	3.15	1.4448
Bibliography Note	45	1	5	3.07	1.3382
DDC Call No.	46	1	5	2.93	1.3889
ISBN	92	1	5	2.57	1.3692

Table 3C
Elements in Core Record Ranked by Undergraduates

Record Element	N	Min.	Max.	Mean	SD
Title	52	2	5	4.54	.6991
Primary Author or Editor	52	1	5	4.38	1.0319
Subject Headings	104	2	5	3.88	.9170
Imprint	52	1	5	3.71	1.2885
Series	26	2	5	3.69	1.0495
LC Call No.	52	2	5	3.6	1.3469
Physical Description	52	1	5	2.96	1.2828
Bibliography Note	52	1	5	2.94	1.1447
DDC Call No.	52	1	5	2.88	1.2152
Edition	26	1	5	2.85	1.5923
ISBN	104	1	5	1.95	.9387

Table 5A
Elements in Full Record Ranked by Faculty

Record Element	N	Min.	Max.	Mean	SD
Title	52	2	5	4.77	.5813
Primary Author or	52	1	5	4.54	.9174

Editor					
LC Call No.	52	1	5	4.35	1.1863
Added Author or Editor	52	1	5	4.21	1.2261
Imprint	52	1	5	4.1	1.2408
Contents Note	52	1	5	3.96	1.1875
Series	26	2	5	3.96	.9584
Uniform Title	26	1	5	3.54	1.4207
Subject Headings	208	1	5	3.5	1.1207
Bibliography Note	52	1	5	3.35	1.4537
Physical Description	52	1	5	3.15	1.4195
DDC Call No.	52	1	5	2.92	1.4799
ISBN	78	1	5	2.73	1.6330

Table 5B
Elements in Full Record Ranked by Graduates

Record Element	N	Min.	Max.	Mean	SD
Primary Author or Editor	46	1	5	4.59	.9563
Title	45	1	5	4.58	.9167
Added Author or Editor	46	1	5	4.3	1.2626
LC Call No.	46	1	5	4.17	1.1412
Series	23	1	5	4.09	.9493
Contents Note	45	1	5	3.78	1.2949
Imprint	46	1	5	3.7	1.2626
Uniform Title	22	1	5	3.59	1.0980
Subject Headings	184	1	5	3.53	1.1011
Bibliography Note	46	1	5	3.22	1.2277
Physical Description	44	1	5	3	1.3640
DDC Call No.	45	1	5	2.96	1.4295
ISBN	69	1	5	2.36	1.2363

Table 5C
Elements in Full Record Ranked by Undergraduates

Record Element	N	Min.	Max.	Mean	SD
Title	52	3	5	4.71	.4985
Primary Author or Editor	52	2	5	4.6	.7985
Added Author or Editor	52	2	5	4.3	1.0392
Series	26	2	5	4.19	.6939
Imprint	52	2	5	3.88	.9631
Contents Note	52	1	5	3.87	1.0484
LC Call No.	52	1	5	3.69	1.1638
Subject Headings	208	2	5	3.55	.9413
Uniform Title	26	1	5	3.31	1.3197
Bibliography Note	52	1	5	3.25	1.3117
DDC Call No.	52	1	5	3.08	1.2183
Physical Description	52	1	5	2.81	1.2991
ISBN	78	1	4	2.14	1.0534

Table 9A1
Core Questionnaire Ranked by Faculty

Question	N	Min.	Max.	Mean	SD
Find	51	1	5	4.57	.98
Identify	51	1	5	4.47	.99
Sufficient Author	51	1	5	4.35	1.15

Question	N	Min.	Max.	Mean	SD
Select	51	1	5	4.24	1.14
Sufficient Title	51	1	5	4.22	1.25
Sufficient Subject	51	1	5	3.98	1.29

Table 9A2
Core Questionnaire Ranked by Graduates

Question	N	Min.	Max.	Mean	SD
Find	44	1	5	4.52	.93
Sufficient Title	44	1	5	4.3	1.15
Identify	44	1	5	4.3	1.09
Sufficient Author	44	1	5	4.09	1.27
Sufficient Subject	44	1	5	4.05	1.20
Select	44	1	5	4.05	1.20

Table 9A3
Core Questionnaire Ranked by Undergraduates

Question	N	Min.	Max.	Mean	SD
Find	52	2	5	4.19	.95
Sufficient Author	52	1	5	4.02	1.06
Identify	52	2	5	3.96	1.05
Sufficient Title	52	1	5	3.71	1.23
Sufficient Subject	52	2	5	3.67	1.13
Select	52	1	5	3.54	1.24

Table 9C1
Full Questionnaire Ranked by Faculty

Question	N	Min.	Max.	Mean	SD
Find	51	1	5	4.39	1.15
Sufficient Title	51	1	5	4.35	1.25
Identify	51	1	5	4.35	1.11
Sufficient Subject	51	1	5	4.29	1.20
Sufficient Author	51	1	5	4.18	1.34
Select	51	1	5	3.73	1.43

Table 9C2
Full Questionnaire Ranked by Graduates

Question	N	Min.	Max.	Mean	SD
Find	44	2	5	4.68	.60
Sufficient Subject	44	2	5	4.59	.79
Sufficient Author	44	2	5	4.59	.69
Identify	44	2	5	4.55	.85
Sufficient Title	44	1	5	4.50	1.00
Select	44	2	5	4.3	.95

Table 9C3
Full Questionnaire Ranked by Undergraduates

Question	N	Min.	Max.	Mean	SD
Find	52	2	5	4.48	.78
Sufficient Author	52	1	5	4.23	1.15
Identify	52	2	5	4.23	.88
Sufficient Subject	52	2	5	4.15	1.04
Sufficient Title	52	1	5	3.83	1.31
Select	52	1	5	3.62	1.11