

## **Major Issues Facing FRBR Research and Practice Identified in a Delphi Study**

Yin Zhang, Ph.D.  
Associate Professor  
School of Library and Information Science  
Kent State University, Kent, OH 44242  
Email: yzhang4@kent.edu  
Phone: 330-672-0010

Athena Salaba, Ph.D.  
Assistant Professor  
School of Library and Information Science  
Kent State University, Kent, OH 44242  
Email: asalaba@kent.edu  
Phone: 330-672-0023

This Delphi study is part of a three-year IMLS-funded project concerning the research and development of FRBR-based retrieval systems that support user tasks and facilitate effective information seeking. The major purpose of the Delphi study was to identify critical issues and challenges within FRBR research and practice by surveying a group of FRBR experts, including researchers, system developers, and members of related FRBR review committees. The authors wish to thank all participants of this study for their valuable contributions.

This brief summary lists the critical issues identified as a result of the study, along with their rating rank, in five major areas of FRBR research and development based on themes found in existing literature: (1) the FRBR model, (2) FRBR-related standards, (3) FRBR applications, (4) FRBR system development, and (5) FRBR research.

## (1) FRBR model

The FRBR model area included issues regarding FRBR model evaluation, model modification, model expansion, and other related models. The major issues identified and their ratings received in this area include:

Rank	Issue	Mean rating score (10 being the most important, 1 the least important)	Frequency
1.	Need to verify and validate the FRBR model against real data and in different communities to make sure the model is valid and applicable.	8.00	19
2.	Need to relate, map, harmonize, and/or compare FRBR to other related models.	7.63	19
3.	Need further development and examination of FRAD.	7.44	16
4.	Need to verify, with user studies, that the FRBR model is appropriate.	7.42	19
5.	Need further development and/or modifications of the FRBR Group 1 entity "Expression."	7.17	18
6.	Need further development and/or modifications of relationships in the FRBR model.	7.11	19
7.	Teaching the FRBR model.	6.89	19
8.	Understanding of the FRBR model and its extensions is not uniform, which may hinder further FRBR development.	6.67	18
9.	Need further development and/or modifications of attributes in the FRBR model.	6.50	18
10.	Need further development and examination of FR SAR.	6.14	14
11.	Need further development and/or modifications of the entities in the FRBR model.	5.79	19
12.	Need to verify the list of user tasks in the FRBR model.	5.29	17
13.	Need further development and/or modifications of the FRBR Group 1 entity "Work."	5.22	18
14.	The FRBR model needs modifications and further development overall.	5.00	19
15.	Need further development and/or modifications of the user tasks in the FRBR model.	4.59	17
16.	Need further development and/or modifications of the FRBR Group 1 entity "Manifestation."	4.47	17

## (2) FRBR-related standards

The FRBR-related standards area mainly included issues regarding the development of standards, mapping FRBR with existing standards, and other related standards. The major issues identified and their ratings received in this area include:

Rank	Issue	Mean rating score (10 being the most important, 1 the least important)	Frequency
1.	Need to develop cataloging rules in line with FRBR.	9.00	16
2.	Need to address FRBR-based record structures, record encoding standards and frameworks for FRBR implementations.	8.40	15
3.	Need to develop FRBR-oriented authority work standards for FRBR implementations.	8.00	16
4.	Need standards to ensure interoperability for exchange and sharing of FRBR-based data.	7.63	16
5.	Need to develop FRBR entity identifiers standards and a management mechanism.	7.25	16
6.	Need to relate and map FRBR to other related standards.	7.00	16
7.	Need further development and mapping of MARC and FRBR.	6.40	15
8.	Need further development and mapping of RDA and FRBR.	6.23	13
9.	Need to develop index standards in line with FRBR.	6.13	15
10.	Need to develop display standards to facilitate better FRBR implementations.	5.80	15
11.	Need further development and mapping of ISBD(s) and FRBR.	3.36	14

## (3) FRBR applications

The FRBR applications area included issues regarding FRBR application in a specific setting, discipline, or collection. The major issues identified and their ratings received in this area include:

Rank	Issue	Mean rating score (10 being the most important, 1 the least important)	Frequency
1.	Need guidelines and examples for FRBR applications.	7.94	17
2.	FRBR's practical applications need a better understanding of FRBR.	7.25	16
3.	Interpretations of the FRBR model vary, which may affect the interoperability of different FRBR applications.	7.12	17
4.	Make FRBR available as an abstract model on the Semantic Web as a demonstration to other communities.	6.13	15
5.	FRBR application may vary between specific disciplinary communities due to the inherent differences within those communities and their respective interpretations of FRBR.	5.56	16
6.	FRBR applications need to address specific complications resulting from format types and format variations.	5.27	15
7.	FRBR is a conceptual model. There is a fundamental difficulty between a conceptual model and its practical application, in general.	3.81	16

#### (4) FRBR system development

The FRBR system development area included issues regarding efforts that help FRBRize existing systems or build new FRBR systems. The major issues identified and their ratings received in this area include:

Rank	Issue	Mean rating score (10 being the most important, 1 the least important)	Frequency
1.	Need to develop and test tools/software that will facilitate FRBRization processes.	8.25	16
2.	Need to explore, develop, and test various means for FRBR implementation.	8.06	16
3.	Need to address the FRBRization of existing data from a variety of differing standards and practices.	8.00	17
4.	Need to explore, design, and develop effective user interfaces in general, with result displays, in particular, based on the FRBR model.	7.82	17
5.	Need applicable implementation models (in contrast to the conceptual model) to facilitate the development of FRBR-based systems.	7.41	17
6.	Need to develop full-scale new FRBR systems that are not dependent on older practices.	6.38	16
7.	Need to address the FRBRization of existing systems.	6.24	17
8.	Need to explore and address FRBRization issues in general.	5.93	15
9.	Develop common systems usable by all parties involved such as publishers, archives, museums, and libraries, etc.	5.69	16
10.	Develop FRBR-based systems for consortial situations.	4.27	11

#### (5) FRBR research

The FRBR research area included issues regarding ensuring that FRBR-based systems meet user needs and implementation of FRBR. The major issues identified and their ratings received in this area include:

Rank	Issue	Mean rating score (10 being the most important, 1 the least important)	Frequency
1.	Need to conduct user studies on FRBR-based systems to ensure implementations benefit end-users.	8.06	17
2.	Need user research in FRBR-based displays.	7.53	17
3.	Need to examine end-user tasks with empirical research.	7.06	17
4.	Research automatic processing of databases or full-text electronic resources to facilitate FRBR implementation.	6.79	14
5.	Semiotic frameworks and research are needed for effective communication between users and FRBR systems.	4.08	13

## (6) Other issues

Other issues that did not fall within any of the categories summarized above were also raised and rated by the panel. The major issues identified and their ratings received in this area include:

<b>Rank</b>	<b>Issue</b>	<b>Mean rating score</b> (10 being the most important, 1 the least important)	<b>Frequency</b>
1.	Work with vendors who carry out other "data enrichment" (authority control processing) to also offer FRBR enrichment of records--and publicize this.	6.93	15
2.	Analysis of the semantic and syntactic relationships	6.33	12
3.	Who's going to drive forth FRBR?	6.30	10
4.	Global or national information services based on FRBR.	5.92	13
5.	Practicality concerns	5.31	13
6.	Is it possible that a solution might lie in the nationally or internationally shared development of OPAC software, using tax dollars, and making the software available to any institution that needs it at a minimal cost?	5.29	14
7.	Cost!	4.86	14
8.	Hard to get to know the community.	2.90	10