

Anne R. Diekema

Assistant Professor, Utah State University (since August 1, 2008)
Emma Eccles Jones College of Education and Human Services

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Education

Ph.D. 2003 Syracuse University, Syracuse, NY. Information Transfer
Dissertation: Translation Events in Cross-Language Information
Retrieval
M.L.S. 1995 Syracuse University. Master of Library and Information Science
Bac. 1993 The Hague Polytechnic, Department of Economics and
Management – Library and Documentary Information. The Hague,
The Netherlands. Baccalaureat.

Professional Memberships

- American Association of School Librarians (AASL)
- American Library Association (ALA)
- American Society for Information Science & Technology (ASIST)
- Association for Computing Machinery (ACM)
- Special Interest Group for Information Retrieval (ACM-SIGIR)
- Special Interest Group on Digital Libraries (ASIST-SIGDL)
- Utah Educational Library Media Association (UELMA)
- Utah Library Association (ULA)

Prior Employment

2008-
present Assistant Professor. (tenure track) Department of Instructional Technology and
Learning Sciences, Utah State University (Logan, UT).
2007-2008 Interim Director. Center for Natural Language Processing (Syracuse, New York).
Leading an active research center, setting policy direction, obtaining research
opportunities, managing budget and financing, networking with funders, managing
personnel, and representing the Center at conferences and funding events.
2003-2008 Assistant Research Professor. School of Information Studies (Syracuse, New York).
Carrying out research in the areas of information retrieval, cross-language
information retrieval, natural language processing, digital libraries, and information
organization. Writing grants, writing papers, creating posters, prototyping ideas,
developing systems, managing student research practica, reviewing papers,
attending conferences, leading various research projects.
2002-2003 Research Analyst. Center for Natural Language Processing (Syracuse, New York).
Co-led NASA-funded automatic question-answering (QA) system project by leading
meetings and participating in the design and development of the QA system.

- Invented and produced prototype for an automatic standard assignment system for the National Science Digital Library.
- 1999-2002 Research Assistant. Center for Natural Language Processing (Syracuse, New York). Led Text Retrieval Conference participation effort by setting research agenda and coordinating information retrieval experiments.
- 1997-1999 Evaluation Researcher. TextWise (Syracuse, New York). Evaluated CINDOR cross-language retrieval system based on a) interviews with government intelligence analysts and, b) participation in the Text REtrieval Conference (TREC).
- 1996-1997 Research Assistant. TextWise (Syracuse, New York). With Prof. Elizabeth Liddy.
- 1995-1996 Teaching Assistant. School of Information Studies, Syracuse University (Syracuse, New York). Course: *Introduction to the Library and Information Profession*.
- 1994-1995 Graduate Assistant. School of Information Studies, Syracuse University (Syracuse, New York).
- 1993 Archivist. Nieboer en Gemako, (Real Estate Broker), (The Hague, The Netherlands).
- 1991-1992 Library Assistant. Bird Library, Syracuse University (Syracuse, New York).
- 1991 Information Systems Analyst. Nederlandse Bakkerij Stichting (Dutch Baker's Association) (The Hague, The Netherlands).
- 1990 Library Assistant. Sociaal Cultureel Planbureau (Social Cultural Planbureau) (Rijswijk, The Netherlands).
- 1990 Library Assistant. American Embassy, American Documentation Center (The Hague, The Netherlands).

Prior Research

- 2008-2009 A Demonstration Project to Update 21st Century Librarians. *IMLS*. Co-Principal Investigator. National Leadership Grant that provides an innovative standards-based approach to improving information literacy teaching and learning through a freely-accessible, K-16 multimedia Web centered teaching support system. \$201,895
- 2007-2008 Real-Time Adaptive Pattern Matching – Fraud Detection. *J.P. Morgan Chase*. Co-Principal Investigator. Exploratory study for the development and application of advanced online and real-time learning algorithms and artificial intelligence methodologies to detect fraudulent transactions. \$72,184
- 2007-2010 State Content Alignment Services. *Verizon Foundation*. Principal Investigator. Aligning Thinkfinity (www.thinkfinity.org) education materials semi-automatically through natural language processing to educational standards of each of the 50 states and the District of Columbia to provide teachers the ability to quickly identify appropriate state aligned lessons for use in their classrooms. \$175,000
- 2007-present Enhancing Access to Digital Collections using Automatic Metadata Assignment and Search Tools. *IMLS*. Principal Investigator. Integration of three digital library tools and services to create a new system, Metadata Assignment and Search Tool (MAST). The tool will enable libraries and museums to efficiently describe and disseminate their digital materials using a combination of automatic and human-mediated processes. \$191,114
- 2007-2008 Enhanced Access to Digital Humanities Monographs. *NEH*. Principal Investigator. Creation of a prototype system to search monographs in the humanities through the application of natural language processing techniques to utilize the rich,

- intellectually-viable information contained in tables of contents and back-of-the-book indexes in combination with the actual text, thus making monographs accessible by capitalizing on the internal structure of the book. \$29,921
- 2007-2008 Computer-Assisted Standard Assignment & Alignment - supplement. *NSF*. Principal Investigator. Supplemental funding to extend the educational standards tools developed in an earlier project by providing additional training for the learn function, carry out user testing, and creating APIs for integration into the National Science Digital Library. \$74,911
- 2006-2009 Improving Public Health Grey Literature Access for the Public Health Workforce. NLM. Co-Principal Investigator. Building a web-based system to gather high quality public health grey literature reports that are currently not easily accessible on the web by providing health-specific document summaries and deep natural language processing-based indexing.
- 2006-2007 Arabic Information Retrieval. *DOJ*. Co-Principal Investigator, Project lead. Provision of a demonstration system of the Arabic information retrieval capability that includes an automatic crawler and incremental indexing capability to allow users to search a constantly updated Arabic newswire collection using English queries, and retrieve Arabic documents and their English translations in response. \$11,018
- 2004-2006 Computer-Assisted Standard Assignment & Alignment. *NSF*. Principal Investigator. Developing two services for the National Science Digital Library: 1) A computer-assisted standards assignment tool for auto-suggesting educational standards for the educational resources in the Library; and 2) A methodology and technology for automatically aligning state standards to selected national standards in order to dramatically improve the ability of teachers to locate resources in the NSDL that will support their standards-based instruction, no matter what state they are in or where a resource was developed. \$634,218
- 2003-2004 Arabic Information Retrieval. *DOJ*. Co-Principal Investigator, Project Lead. Research and development of a generalizable methodology for producing cross-lingual information retrieval systems that will support users who have minimal understanding of the languages of the documents they need to search. First implemented in Arabic. \$495,957
- 2002-2004 MetaTest: Evaluating the Quality and Utility of Metadata. *NSF*. Consultant (on information retrieval evaluation). Evaluation of the quality and utility of automatically assigned 23 metadata elements to learning resources as compared to manually assigned metadata, with teachers, professors of education, and metadata experts as subjects.
- 2001-2006 Adaptive Interactive Discovery Environment (AIDE): A Revolutionary Learning Environment. *NASA, AT&T, US Army*. Co-Project Lead. Creating a specialization of a generic question-answering system for a collaborative learning environment for use by aerospace engineering students. The system incorporates an interactive element based on the concept of a librarian's reference interview, in which the user can clarify and more appropriately focus an information need. The project includes extensive evaluation of the usability and understandability.
- 2001-2003 StandardConnection: Mapping Educational Objects to Content Standards. *NSF*. Project Lead. Development and testing of a semi-automatic middleware tool to

- automatically assign educational content standards to educational resources for use by teachers in selecting relevant lesson plans.
- 1999-2000 E-query. *In-Q-Tel*. Research Assistant. Automatic knowledge extraction from massive data sources for the purpose of discovery of relations between people and organizations.
- 1997-1999 Conceptual Interlingua Document Retrieval (CINDOR). SBIR-Phase II Award. *DARPA*. Co-Project Lead. Building and evaluating a cross-language text retrieval system capable of accepting a user's query stated in their native language and then seamlessly searching, retrieving, relevance ranking and displaying (translated) documents written in a variety of foreign languages (English, French, Spanish, and Japanese). Developing a conceptual interlingua dictionary that allows queries to be matched at the concept level rather than relying on exact word matches.

Prior Teaching

- 2007 Lecturer: *Readings and Research in Information Retrieval* for Software Engineers and Doctoral Students.
- 2006 Lecturer: Cross-Language Information Retrieval in *Basics of Computerized Information Retrieval* for Seniors, Masters, and Doctoral Students.
Lecturer: Information Retrieval Models in *Basics of Computerized Information Retrieval* for Seniors, Masters, and Doctoral Students.
- 2005 Lecturer: Information Retrieval in *Foundations of Information Science* for Seniors, Masters and Doctoral Students.
- 2004 Lecturer: English-Arabic Cross-Language Information Retrieval in *Basics of Computerized Information Retrieval* for Seniors, Masters, and Doctoral Students.
Lecturer: WordNet Theme Detection and Assignment in *Content Analysis Research Using Natural Language Processing* for Doctoral Students.
Lecturer: Information Retrieval Models in *Basics of Computerized Information Retrieval* for Seniors, Masters, and Doctoral Students.
- 2003 Lecturer: Cross-Language Information Retrieval in *Basics of Computerized Information Retrieval* for Seniors, Masters, and Doctoral Students.
- 2002 Lecturer: Word Sense Disambiguation in *Natural Language Processing* for Seniors, Masters, and Doctoral Students.
- 2001 Lecturer: Question Answering in *Basics of Computerized Information Retrieval* for Seniors, Masters, and Doctoral Students.
Lecturer: Cross-Language Information Retrieval in *Basics of Computerized Information Retrieval* for Seniors, Masters, and Doctoral Students.
- 1998 Teaching Assistant: *Basics of Computerized Information Retrieval* for Masters Students. Organized and developed course syllabus, selected weekly readings. Created homework and in-class assignments and was responsible for grading.
- 1997 Teaching Assistant: *Information Systems: Theory and Design* for Masters Students. Created web pages for online course materials on the Dewey Decimal Classification and the Library of Congress Classification.
- 1996 Teaching Assistant: *Information Systems: Theory and Design* for Masters students. Taught course sections on bibliometrics, standards, and information retrieval. Organized online group sessions. Graded assignments.

- 1995 Teaching Assistant: *Senior Seminar in Information Systems* for Seniors. Taught sections on ethics and professionalism. Graded assignments and selected readings. Seniors.
- 1995 Teaching Assistant: *Management of Libraries & Information Centers* for Masters Students. Taught course sections on marketing, power and authority in organizations, and graded assignments. Organized online group sessions and moderated the class listserv.
- 1995 Teaching Assistant: *Introduction to the Library and Information Profession* for Masters students Taught introductions to electronic mail, gopher, ftp, telnet and the WWW.

Prior Service

National Service

Reviewer, American Society for Information Science & Technology Annual Meeting, 2008

Program Committee Member, Special Interest Group on Information Retrieval Annual Conference, 2008

Reviewer, Journal of Information Technology & People, 2008

Reviewer, Annual Meeting of the Association for Computational Linguistics: Human Language Technologies (Information Retrieval Track), 2008

Program Committee Member, Association for Computational Linguistics - Student Research Workshop, 2007 - 2008

Program Committee Member, Information Retrieval track of Conference on Information and Knowledge Management (CIKM), 2006

Reviewer, ACM Transactions on Information Systems (TOIS), 2006

Reviewer, Journal of the Society for Information Science & Technology, 2005

Reviewer, Annual Meeting of the American Society for Information Science & Technology, 2005

Reviewer, Human Language Technology Conference and the Conference on Empirical Methods in Natural Language Processing (HLT-EMNLP), 2005

Reviewer, The Journal of Information Retrieval, 2004-2005

Reviewer, Transactions of Asian Language Information Processing (ACM-TALIP), 2004

Review Panel Member, National Science Foundation, 2004

Reviewer, Computational Linguistics (COLING) Annual Conference, 2004

Reviewer, Journal of Information Processing & Management, 2003-2005

Reviewer, Special Interest Group on Information Retrieval Annual Conference, 2001-2003, 2005, 2007

Departmental and University Service

Faculty, Faculty at the Interdisciplinary Linguistics Program at the College of Arts and Science at Syracuse University, 2005-2008

Advisor, Ph.D. student advisor (during research professor position), 2005-2007

Advisor, Ph.D. student research practicum advisor (during research professor position), 2005-2006

Awards/Honors

- 2008 Phi Beta Mu – Admitted to the International Library & Information Studies Honor Society
- 2004 Syracuse University Doctoral Prize
- 2003 UMI/ProQuest Doctoral Dissertation Award
- 2000 Institute for Scientific Information (ISI) Doctoral Dissertation Proposal Award
- 1999 Eugene Garfield Doctoral Dissertation Fellowship
- 1997 Phi Beta Delta: Honor Society for International Scholars
- 1995 Summa Cum Laude MLS
- 1994 Joseph and Marta Dosa Scholarship (Beta Phi Mu)
- 1993 Scholarship to study in the U.S. (VSB Fonds)
- 1993 Class Valedictorian

Part A: Research

To download papers, presentations, and open courseware:
http://works.bepress.com/anne_diekema/

Publications - Refereed Journal Articles – Under Review and Revision

- Diekema, A.R. and Xu, B. (under review) An educational digital library evaluation rubric: a teacher-centric approach. Manuscript to be submitted for publication to the Journal of the American Society for Information Science and Technology before September 15.
- Reitsma, R.F. and Diekema, A.R. (under review) Comparison of Human and Machine-based Educational Standard Assignment Networks. Manuscript submitted for publication to the International Journal on Digital Libraries.
- Diekema, A. R. Diekema, Leary, H., Haderlie, S. and Walters, C.D. (under review) Teaching Use of Digital Primary Sources for K-12 Settings. Manuscript submitted for publication to the Journal of Education in Library and Information Science.
- Diekema, A. R., Holliday, W., Leary, H. (under review). Re-Framing Information Literacy: Problem-Based Learning as Informed Learning. Manuscript submitted for publication to Library & Information Science Research.

Publications - Refereed Journal Articles – Published

- Devaul, H., Diekema, A.R., Ostwald, J. (in press). “Computer Assisted Assignment of Educational Standards using Natural Language Processing. Manuscript submitted for publication to Journal of the American Society for Information Science & Technology.

Diekema, A.R. Implications and Challenges of Educational Standards Metadata. *Journal of Library Metadata*, 9(3), 239 – 251, 2009

Belland, B., Bentley, J., Burnham, B., Diekema, A., Eastmond, N., Haderlie, S., et al. An Identity Shift at Utah State University: What's in a Name? *USU Instructional Technology & Learning Sciences Faculty. Educational Technology*, 49(4), 38-41, 2009.

Oard, D. and Diekema, A. "Cross-Language Information Retrieval" *Annual Review of Information Science (ARIST)*, Vol. 33, Martha Williams (Ed.), Information Today Inc., Medford, NJ, 1998.

Publications - Refereed Book Chapters

Diekema, A.R., Yilmazel, O., Chen, J., Harwell, S., He, L., and Liddy, E.D. Finding Answers to Complex Questions. In Maybury, M.T. (Ed.) *New Directions in Question Answering*. The MIT Press, 2004, p. 141-152.

Publications – Refereed Conference Proceedings – Published

René F. Reitsma and Anne R. Diekema. Network-based Comparison of Human and Machine-based Educational Standard Assignment. The 2010 International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2010). Odense, Denmark, 9-11 August, 2010.

McCracken, N.M. and Anne R. Diekema. Publishing Digital Museum Collections on the Web Using the Metadata Assignment and Search Tool. *Museums and the Web 2010*. Denver, Colorado, April 13-17, 2010.

Diekema, A.R., Bailey, Jennifer A. and Bennett, Blythe A., Devaul, Holly. Unleashing the Usefulness of Educational Resources through Mining of Educational Metadata. In: *Proceedings of the 2008 Open Education Conference*. Logan, UT, September 24-26, 2008.

Diekema, A. R., Yilmazel, O., Bailey, J., Harwell, S. C. and Liddy E. D. Standards Alignment for Metadata Assignment. In: *Proceedings of the Joint Conference of Digital Libraries (JCDL 2007)*. Vancouver, British Columbia, June 18-23, 2007.

Yilmazel, O., Balasubramanian, N., Harwell, S. C., Bailey, J., Diekema, A. R., & Liddy, E. D. (2007). Text Categorization for Aligning Educational Standards. *Hawaii International Conference on System Sciences*, Waikoloa, Hawaii, January 3-6, 2007.

McCracken, N. J., Diekema, A. R., Ingersoll G., Harwell, S. C., Allen, E. E., Yilmazel, O., Liddy E. D. Modeling Reference Interviews as a Basis for Improving Automatic QA Systems. In: *HLT-NAACL 2006 Workshop on Interactive Question Answering*. New York, New York, June 8-9, 2006, p. 17-24.

- Diekema, A.R. and Chen, J. Experimenting with the Automatic Assignment of Educational Standards to Digital Library Content. In: *Proceedings of the Joint Conference of Digital Libraries*. Denver, Colorado, June 7-11, 2005.
- Diekema, A.R. Preliminary Lexical Framework for English-Arabic Semantic Resource Construction. *COLING 2004 Workshop on Computational Approaches to Arabic Script-based Languages*. Geneva, Switzerland, 2004.
- Diekema, A.R., Yilmazel, O., Liddy, E.D. Evaluation of Restricted Domain Question-Answering Systems. In: *Proceedings of the 42nd Meeting of the Association for Computational Linguistics, Workshop for Question Answering in Restricted Domains*. Barcelona, Spain, July 25th, 2004.
- Balasubramanian, N., Diekema, A.R., and Goodrum, A.A. Analysis of User Image descriptions and Automatic Image Indexing Vocabularies: An Exploratory Study. *International Workshop on Multidisciplinary Image, Video, and Audio Retrieval and Mining*. Sherbrooke, Quebec, Canada, October 25-26, 2004.
- Diekema, A.R., Yilmazel, O., Chen, J., Harwell, S., He, L., Liddy, E.D. "What Do You Mean? Finding Answers to Complex Questions." In: *Proceedings of the AAAI Spring Symposium: New Directions in Question Answering*. Palo Alto, California, 2003.
- De Vries, A.P. and Diekema, A. R. "Some Experiments with the Dutch Collection." In: *Proceedings of the Cross-Language Evaluation Forum 2002*, Rome, Italy, September 2002.
- Diekema, A.R. "Translation Events in Dutch Cross-Language Information Retrieval" In: *Proceedings of the 3rd Dutch-Belgian Information Retrieval Workshop*. Leuven, Belgium. December 6, 2002.
- Diekema, A. and Hsiao, W. "Cross-Language Information Retrieval using Dutch Query Translation." In: *Proceedings of the Cross-Language Evaluation Forum, 4th European Conference ECDL*, Lisbon, Portugal, September 2000.
- Liu, X., Diamond, T., and Diekema, A. "Word Sense Disambiguation for Cross-Language Information Retrieval." In: *Proceedings of the ANLP-NAACL2000 Student Research Workshop*. Seattle, WA. Association for Computational Linguistics, 2000.

Publications - Non-refereed Articles

- Diekema, A.R., Chen, J., McCracken, N, Ozgencil, N.E., Taffet, M.D., Yilmazel, O. and Liddy, E.D. "Question Answering: CNLP at the TREC-2002 Question Answering Track." In: *Proceedings of the Eleventh Text Retrieval Conference (TREC-2002)*. E.M. Voorhees and D.K. Harman (Eds.). Gaithersburg, MD: Department of Commerce, National Institute of Standards and Technology, 2002.

Chen, J., Diekema, A.R., Taffet, M. D., McCracken, N., Ozgencil, N. E., Yilmazel, O., and Liddy, E. D. "Question-Answering: CNLP at TREC-10 Question Answering Track." In: *Proceedings of the Tenth Text Retrieval Conference (TREC-2001)*. E.M. Voorhees and D.K. Harman (Eds.). Gaithersburg, MD: Department of Commerce, National Institute of Standards and Technology, 2001.

Diekema, A. Liu, X., Chen, J., Wang, H., McCracken, N., Yilmazel, O., and Liddy, E.D. "Question Answering : CNLP at the TREC-9 Question Answering Track." In: *Proceedings of the Ninth Text Retrieval Conference (TREC-9)*. E.M. Voorhees and D.K. Harman (Eds.). Gaithersburg, MD: Department of Commerce, National Institute of Standards and Technology, 2000.

Ruiz, M., Diekema, A., Sheridan, P. "CINDOR Conceptual Interlingua Document Retrieval: TREC-8 Evaluation." In: *Proceedings of the Eight Text Retrieval Conference (TREC-8)*. E.M. Voorhees and D.K. Harman (Eds.). Gaithersburg, MD: Department of Commerce, National Institute of Standards and Technology, 1999.

Diekema, A., Oroumchian, F., Sheridan, P., Liddy, E. D. "TREC-7 Evaluation of Conceptual Interlingua Document Retrieval (CINDOR) in English and French." In: *Proceedings of the Seventh Text Retrieval Conference (TREC-7)*. E.M. Voorhees and D.K. Harman (Eds.). Gaithersburg, MD: Department of Commerce, National Institute of Standards and Technology, 1998.

Refereed Conference Presentations

- 2010 *Scaffolding Information Literacy with Problem-Based Learning* (October 2010)
 Heather Leary, Wendy Holliday, Anne Diekema
 Association for Educational Communications and Technology, Anaheim, CA.
 Tools for Using and Organizing Online Resources to Enhance Reference and Instruction (05/14/10) Sheri Haderlie, Heather Leary, Cheryl Walters, and Anne Diekema
 Utah Library Association Annual Conference, St. George, UT.
 Resource Discoverability (05/13/10) Liz Woolcott, Cheryl Walters, and Anne Diekema
 Utah Library Association Annual Conference, St. George, UT.
 Using Technology to Provide Leadership to Teachers (03/05/10)
 Utah Educational Library Media Association Annual Meeting, Orem, UT.
- 2009 *Measuring the Impact of Cyberlearning* (11/19/09)
 National Science Digital Library Annual Meeting, Washington, D.C.
 Using Digital Primary Sources for Teaching (10/01/09) Anne Diekema, Sheri Haderlie, Heather Leary and Cheryl Walters.
 Utah Education Association, Sandy, UT.
 Teaching Information Literacy with Authentic Problems: Creating and Using an Online Module (04/24/09) Heather Leary, Wendy Holliday, Anne Diekema. Utah Library Association Annual Meeting, Sandy, UT.
 Using Digital Primary Sources to Enhance Teaching and Learning (03/05/09) Sheri

- Haderlie, Cheryl Walters, Heather Leary, and Anne Diekema. Utah Educational Library Media Association Annual Meeting, Ogden, UT.
- 2008 *Educational Standards to Enhance Digital Library Accessibility: Research and Development* (10/11/08) Invited talk for the School of Library and Information Sciences - University of North Texas Introduction to Digital Libraries meeting in Salt Lake City, UT
- Solutions for Correlating Collections to K-12 Content Standards for Interoperability* (10/01/08) Stuart Sutton, Diny Golder, Anne Diekema. National Science Digital Library Annual Meeting. Washington, D.C.
- Unleashing the Usefulness of Educational Resources through Mining of Educational Metadata* (09/25/08) Anne Diekema, Jennifer Bailey, Blythe Bennett, Holly Devaul. Open Education 2008. Logan, UT
- 2007 *Evaluating Search in Digital Libraries* (11/08/07)
National Science Digital Library Annual Meeting, Arlington, VA
- Educational Standard Correlation Services for Digital Libraries* (11/07/2007)
Jennifer A. Bailey, Holly Devaul, Anne R. Diekema, Jonathan Ostwald, John Weatherly
- National Science Digital Library Annual Meeting, Arlington, VA
- Standards Alignment for Metadata Assignment* (6/22/2007)
Anne R. Diekema, Ozgur Yilmazel, Jennifer Bailey,
Sarah C. Harwell, and Elizabeth D. Liddy
- Joint Conference for Digital Libraries, Vancouver, BC
- 2006 *Assigning and Aligning State and National Educational Standards* (10/19/2006)
Anne R. Diekema, Sarah C. Harwell, Jennifer A. Bailey, Ozgur Yilmazel, and Elizabeth D. Liddy
- National Science Digital Library Annual Meeting, Washington, DC
- Evaluating Metadata from Different Perspectives* (6/15/2006) Metadata Tools for Digital Resource Repositories JCDL Workshop.
- Computer Assisted Standard Assignment and Alignment* (03/16/2006) Holly Devaul, Anne R. Diekema
- National Science Digital Library Online ToolTime presentation
- NLP for NSDL....(and all of NSF!)* (1/25/2006) Elizabeth D. Liddy and Anne R. Diekema
- National Science Foundation, Washington, DC
- 2005 *How to Get Standards in Your Metadata?*(11/16/2005) Anne R. Diekema, Niranjan Balasubramanian, Sarah Harwell, Elizabeth D. Liddy
- National Science Digital Library All Projects Meeting, Denver, CO
- Standards Assignment and NSDL Service Integration* (11/18/2005)
Anne R. Diekema, Niranjan Balasubramanian, Sarah Harwell, Elizabeth D. Liddy, Holly Devaul
- National Science Digital Library All Projects Meeting, Denver, CO
- Experimenting with the Automatic Assignment of Educational Standards to Digital Library Content* (6/9/2005) Anne R. Diekema, Jiangping Chen
- Joint Conference on Digital Libraries, Denver, CO
- Evaluating Metadata from Different Perspectives* (5/15/2005)
Joint Conference for Digital Libraries

- Metadata Tools for Digital Resource Repositories Workshop. Chapel Hill, NC
Cross-Language Information Exploitation of Arabic (4/27/2005)
 Elizabeth D. Liddy and Anne R. Diekema
 Syracuse University Technology Day. Syracuse, NY.
- 2004 *Preliminary Lexical Framework for English-Arabic Resource Construction*
 (08/29/2004)
 The 20th International Conference on Computational Linguistics
 Workshop: Computational Approaches to Arabic Script-based Language.
 Geneva, Switzerland.
- 2003 *Current Progress in Automatic Question Answering: Challenge or Opportunity?*
 (10/20/2003) Jiangping Chen, Anne R. Diekema, and Elizabeth D. Liddy
 American Society for Information Science and Technology, Long Beach, CA
Metadata Development and Implementation: Automatic Mapping
of Educational Resources to Content Standards (10/15/2003) National Science
 Digital Library All Projects Meeting, Washington, DC
- 2002 *Automatic Question-Answering in the Aerospace Domain: Technical Reference*
using Dynamic Searches (11/11-12/2002) Jiangping Chen, Anne R. Diekema,
 Ozgur Yilmazel, and Elizabeth D. Liddy
 Virtual Reference Desk Conference, Chicago, IL
- 2000 *May the Best Team Win: Language Resources in CLIR* (09/21/2000) Cross-
 Language Evaluation Forum, Lisbon, Portugal

Conference Panel Presentations - Refereed

- 2009 *Personalizing Search* (11/19/09) Lynne Davis and Anne R. Diekema
 National Science Digital Library Annual Meeting. Washington, D.C.
- 2008 *Sharing Evaluation Expertise and Results* (10/01/08) National Science
 Digital Library Annual Meeting. Washington, D.C.

Conference Posters - Refereed

- D'Ignazio, J. A., Ryan, J.D., Harwell, S. C., Diekema, A.R. and Liddy, E.D. (2007): Examining
 perception of digital information space. In: *Proceedings of the Joint Conference of Digital*
Libraries (JCDL 2007). Vancouver, British Columbia, June 18-23, 2007, p. 479.
- Liddy, E. D.; Chen, J.; Finneran, C. M.; Diekema, A. R. Harwell, S. C.; Yilmazel, O. A
 Retrospective on Generating & Evaluating Automatic Metadata for Educational Resources: A
 Holistic Program. *Ninth European Conference on Research and Advanced Technology for*
Digital Libraries (ECDL 2005) Vienna, Austria, September 18-23, 2005
- Diekema, A.R., Hannouche, J., Ingersoll, G., Oddy, R.N., Liddy, E.D. Analyst-Focused Arabic
 Information Retrieval. In: *Proceedings of the 2005 International Conference on Intelligence*
Analysis. McLean, VA, May 2-6, 2005.

Liddy, E.D., Diekema, A.R., and Yilmazel, O. Context-Based Question-Answering Evaluation. In: *Proceedings of the Special Interest Group for Information Retrieval*. Sheffield, England, 2004.

Liddy, E. D.; Allen, E.; Harwell, S.; Corieri, S.; Yilmazel, O.; Ozgencil, N. E.; Diekema, A.; McCracken, N.; Silverstein, J. and Sutton, S. Automatic Metadata Generation & Evaluation. In: *Proceedings of the Special Interest Group for Information Retrieval*. Tampere, Finland, 2002.

Conference Posters – Non-Refereed

Diekema, A.R., Xu, Beijie. Exposing Educational Resources in the NSDL and its Pathways. National Science Digital Library Annual Meeting, Washington, D.C., November 17 – 19, 2009.

Diekema, A.R., Steven A. Rowe, Blythe A. Bennett. Text Mining Educational Metadata. *National Science Digital Library Annual Meeting*, Washington, D.C., September 30 – October 2, 2008.

Diekema, A.R., Bailey, J.A., Cyr, M., Reitsma, R., and Sullivan, J. Making Your Content Accessible to a Wider Audience. *National Science Digital Library Annual Meeting*, Arlington, VA, November 5-8, 2007.

Golder, D., Diekema, A., Devaul, H., Cariani, K. and Sutton, S. Achievement Standards Architecture in the NSDL. *National Science Digital Library Annual Meeting*, Arlington, VA, November 5-8, 2007.

Diekema, A. R., Harwell, S. C., Bailey, J. A., Yilmazel, O. and Liddy, E. D. Automatic Standard Alignment Through Machine Learning Techniques. *National Science Digital Library Annual Meeting*, Washington, DC, October 18-20, 2006.

Balasubramanian, N.; Devaul, H.; Diekema, A.R.; Harwell, S.C. and Liddy, E.D. NLP-based Content Standard Assignment. *National Science Digital Library Annual Meeting*, Denver, CO, November 16-18, 2005.

Diekema, A.R. and Liddy, E.D. Computer-Assisted Content Standard Assignment & Alignment. *National Science Digital Library Annual Meeting*, Chicago, IL, November 15-17, 2004.

Chen, J.; Diekema, A.R. and Liddy, E.D. Automatic Mapping of Resources to Content Standards. *National Science Digital Library Annual Meeting*, Washington, DC, October 12-15, 2003.

Academic Publications

Diekema, A. R. *Translation Events in Cross-Language Information Retrieval: Lexical Ambiguity, Lexical Holes, Vocabulary Mismatch, and Correct Translations*. School of Information Studies, Syracuse University, 2003.

Open Courseware, Wikis, and Blogs

Diekema, Anne R.: (2010) Grant Writing Resources, <http://inst6760.wikispaces.com/>

Diekema, Anne R.; Walters, Cheryl; Woolcott, Liz. (2010). Resource Discoverability at the Crossroads. <http://findability.wikispaces.com/>

Diekema, Anne R.; Leary, Heather; Walters, Cheryl; Haderlie, Sheri "Tools for Using and Organizing Online Resources" (2010). <http://toolsforusingandorganizingonlineresources.wikispaces.com/>

Diekema, Anne R. "Leading with Technology" (2010). <http://leadingwithtechnology.blogspot.com/>

Leary, Heather; Diekema, Anne R.; and Holliday, Wendy, "Information Literacy: Finding and Using Information, January 2009" (2009). Instructional Technology & Learning Sciences - OCW. Course 3. http://digitalcommons.usu.edu/ocw_itls/3

Funded Research Activities

- 2010-2011 Data Collection, Analysis for Utah State Libraries 5-Year Plans (2008-12, 2013-18). State Library Division (Utah State Library). Co-Principal Investigator. Grant to collect and analyze data from Utah libraries and their stakeholders. \$36,322
- 2009-2010 Measuring the Impact of Cyberlearning: the Convergence of Curricular Resources, Achievement Standards and Assessments. *USU Research Catalyst Grant*. Principal Investigator. Grant to Support the development of NSF grant application to establish means to measure the impact of digital educational resources on learning using curricular resources and assessments. \$29,410
- 2009 Integrating Primary Resources into K-12 Teaching in Northern Utah. *Metropolitan State College of Denver / Auraria Higher Education Center*. Co-Principal Investigator. Grant to introduce primary sources to Utah teachers and school library media specialists through a 3-day workshop, assignments, focus group and conference meetings. \$10,000
- 2008-2009 A Demonstration Project to Update 21st Century Librarians. *IMLS*. Co-Principal Investigator. Grant partially transferred to Utah State. National Leadership Grant that provides an innovative standards-based approach to improving information literacy teaching and learning through a freely-accessible, K-16 multimedia Web centered teaching support system. \$8,578
- 2007-2010 State Content Alignment Services. *Verizon Foundation*. Principal Investigator. Grant partially transferred to Utah State. Aligning Thinkfinity (<http://www.thinkfinity.org>) education materials semi-automatically through natural language processing to educational standards of each of the 50 states and the District

- of Columbia to provide teachers the ability to quickly identify appropriate state aligned lessons for use in their classrooms. \$12,019.26
- 2007-2010 Enhancing Access to Digital Collections using Automatic Metadata Assignment and Search Tools. IMLS. Principal Investigator. Grant partially transferred to Utah State. Integration of three digital library tools and services to create a new system, Metadata Assignment and Search Tool (MAST). The tool will enable libraries and museums to efficiently describe and disseminate their digital materials using a combination of automatic and human-mediated processes. \$17,853.53

Part B: Teaching

- 2010 (Fall) Assistant Professor: *School Library Media Foundations and Information Management* (INST5000/INST6060) for Undergraduates and Masters Students.
- 2010 (Spring) Assistant Professor: *Grant Writing* (INST6760) for Masters Students.
Assistant Professor: *Principles and Practices of Technology for Elementary Teachers* (INST4010) for Undergraduates.
Assistant Professor: *Information Access and Technology* (INST5030/INST6030) for Undergraduates and Masters Students.
- 2009 (Fall) Assistant Professor: *Principles and Practices of Technology for Elementary Teachers* (INST4010) for Undergraduates.
Assistant Professor: *School Library Media Foundations and Information Management* (INST5000/INST6060) for Undergraduates and Masters Students.
Assistant Professor: *Pro-Seminar I – in Instructional Technology* (INST7000) for Doctoral Students.
- 2009 (Summer) Assistant Professor: Teaching with Primary Sources (3 day workshop) for teachers and school library media specialists)
- 2009 (Spring) Assistant Professor: *Information Access and Technology* (INST5030/INST6030) for Undergraduates and Masters Students.
- 2008 (Fall) Assistant Professor: *School Library Media Foundations and Information Management* (INST5000/INST6060) for Undergraduates and Masters Students.
Assistant Professor: *Pro-Seminar I – in Instructional Technology* (INST7000) for Doctoral Students.
Guest Lecturer: *Convergence of Instructional Technology and Information Science research* in INST7300 Research in Instructional Technology and Learning Sciences for Doctoral Students.

Part C: Service

National

Officer, Special Interest Group Digital Libraries (SIGDL) 2009-2010

Reviewer, Journal of the American Society for Information Science and Technology, 2010

Reviewer, Journal of Information Science, 2010

Reviewer, for book chapter in Teaching and Learning Information Retrieval, 2010

Review Panel Member, National Endowment for the Humanities (Digital Humanities), 2009

Reviewer, Conference of the European Chapter of the Association for Computational Linguistics (EACL), 2008-2009

Program Committee Member, NSF National Science Digital Library Annual Meeting, 2007-present

Program Committee Member, Dutch-Belgian Information Retrieval (DIR) Workshop, 2003 - 2005, 2007 - present

Co-Chair, National Science Digital Library, Educational Impact and Evaluation Standing Committee (EIESC), 2005 – 2008

University

Member, Admissions and Awards Committee, 2008-present

Chair, Faculty, Teaching, Evaluation, and Accreditation Committee, 2008-present