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The Scope of *Numeracy* after Five Years

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The Scope of *Numeracy* after Five Years

Abstract

The purpose of this editorial is to provide an efficient way for readers and potential authors to see (a) what type of papers are published in this journal and (b) what subjects are appropriate. The editorial consists mainly of about a dozen pages of tables including live links to the papers' access/abstract pages to facilitate easy browsing. In the first table, the 85 papers that have been published in the journal's first five years are classified into: review papers; research papers; case studies; essays; book reviews; columns; and editorials about the journal. In the second table, the papers are inventoried into overlapping sets on: assessment; QL and writing; the construct of QL; focused QL courses and curricula; QL across the curriculum; QL centers; algebra and calculus education; statistics education; intersections with science and engineering; intersections with social sciences; financial numeracy; health numeracy; math anxiety; and cognition. Browsing these links confirms what we said in the first editorial: the scope of *Numeracy* is huge.

Keywords

quantitative literacy, quantitative reasoning

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Cover Page Footnote

Len Vacher, a geologist, and Dorothy Wallace, a mathematician, are co-editors of this journal.

The first issue of this journal was five years ago, and the editorial in it was “The Scope of Numeracy.” In it, we said the following:

The mission of the NNN [National Numeracy Network, which publishes *Numeracy*] is to promote education that integrates quantitative skills across all disciplines and at all levels. Accordingly, the scope of the journal is huge.

We went on to discuss the kind of papers and range of subject matter that we expected to publish. In truth, we did not really know what would be submitted. Now, after five years of receiving manuscripts and publishing 85 of them, it is worthwhile to pause and take a look at the kinds of papers and scope of content that has turned up in this journal.

On the table of contents pages of the ten issues from Jan 2008 (v. 1, issue 1) through July 2012 (v. 5, issue 2), the 85 papers are partitioned into editorials (12 in the ten issues), articles (44), perspectives (9), notes (1), book reviews (10) and the Parts of the Whole column by Wallace (9). These papers are listed here, together with live links to their abstract pages, in Table 1 of the Appendix. In that table, the papers are classified by kind a different way: (A) review papers (9); (B) research papers (15); (C) case studies (22); (D) essays, editorials and expository pieces (17), (E) book reviews (9), (F) the Parts of the Whole pieces (9), and (G) editorials about the journal (3).

Clicking the links in Table 1 and browsing through the abstracts will quickly demonstrate the vast range of subjects that are appropriate for *Numeracy*. Table 2 gives a rough inventory. First, there are two obvious themes that have emerged: (A) educational assessment (13 papers) and (B) QL and writing (12). Then there are three areas of obvious and expected interest: (C) the construct (what is QL?) (20 papers); (D) focused QL courses and curricula (12); (E) QL across the curriculum (12); and (F) QL centers (2, surprisingly few). As for particular math courses other than those focused on QL, there are (G) algebra and calculus education (5 papers) and (H) statistics education (2). Regarding intersections with other disciplines, there are: (I) QL and science and engineering (10) and (J) QL and social sciences (8). And finally, there are four cross-cutting, non-disciplinary subjects that we hope will become more prevalent in the journal: (K) financial numeracy (3 papers); (L) health numeracy (3); (M) math anxiety (2) and (N) cognition (2).

The contributed papers in this new issue of *Numeracy* (v. 6, issue 1) continue to expand the scope and flesh out the content of QL. Research neuroscientists Gavin Price and Daniel Ansari review what is known about dyscalculia (topic N of Table 2). Pete Nye and Cinnamon Hillyard report a study of the interaction of QL on the financial behavior of consumers (topic K). Robert Mayes, Franziska Peterson and Rachel Bonilla analyze the QR literature from the mathematics education community with the purpose of building a framework to teach QL in the context of environmental science (topics C and I). Stuart Boersma and

Dominic Klyve present two exploratory research studies of students in their QL in the media courses; in the first, they compare learning gains in honors and non-honor sections (topics B and D); in the second, they develop an instrument to assess the “habit of mind” component of QL (topics B, D, and A). Finally, in a statistical literacy note, David Lane examines a media report that was based on research using too many subgroup analyses (topics H and J).

Several papers are already in the pipeline for issue 2 of the 2013 volume on a typically wide range of topics. In addition, we hope to include a theme collection of papers on financial literacy edited by Annamaria Lusardi, Audrey Brown, and Dorothy Wallace.

In the first five years of its existence, *Numeracy* has met its goals for breadth, reaching across multiple disciplines as well as educational level. As its scope continues to expand, *Numeracy* will prove an even more useful resource for the growing audience of researchers, teachers and administrators interested in improving quantitative literacy among students of all ages.

Appendix: Tables

Table 1.
Kinds of papers

A. <u>Review papers</u>			
Madison and Steen	2008	Evolution of numeracy and the National Numeracy Network	http://dx.doi.org/10.5038/1936-4660.1.1.2
Scheaffer	2008	Scientifically based research in quantitative literacy: Guidelines for building a knowledge base	http://dx.doi.org/10.5038/1936-4660.1.1.3
Vacher and Chavez	2008	Quantitative literacy on the Web of Science, 1: The bibliography and its role in the history of this journal	http://dx.doi.org/10.5038/1936-4660.1.2.2
Wenner et al.	2009	The case for infusing quantitative literacy into introductory geoscience courses	http://dx.doi.org/10.5038/1936-4660.2.1.4
Vacher and Chavez	2009	Quantitative literacy on the Web of Science, 2 – Mining the health numeracy literature for assessment items	http://dx.doi.org/10.5038/1936-4660.2.1.5
Miller	2011	Four popular books on consumer debt: A context for quantitative literacy	http://dx.doi.org/10.5038/1936-4660.4.1.7
Lusardi	2012	Numeracy, financial literacy, and financial decision-making	http://dx.doi.org/10.5038/1936-4660.5.1.2
Hillyard	2012	Comparative study of the numeracy education and Writing Across the Curriculum movements: Ideas for future growth	http://dx.doi.org/10.5038/1936-4660.5.2.2
MacLellan	2012	Number sense: The underpinning understanding for early quantitative literacy	http://dx.doi.org/10.5038/1936-4660.5.2.3

B. Research papers

Grawe et al.	2010	A rubric for assessing quantitative reasoning in written arguments	http://dx.doi.org/10.5038/1936-4660.3.1.3
Guardiola et al.	2010	Are statistics labs worth the effort? – Comparison of introductory statistics courses using different teaching methods	http://dx.doi.org/10.5038/1936-4660.3.1.5
Sundre and Thelk	2010	Advancing Assessment of Quantitative and Scientific Reasoning	http://dx.doi.org/10.5038/1936-4660.3.2.2
Steele and Kilic-Bahi	2010	Quantitative literacy: Does it work? Evaluation of student outcomes at Colby-Sawyer College	http://dx.doi.org/10.5038/1936-4660.3.2.3
Madison and Dingman	2010	Quantitative Reasoning in the Contemporary World, 2: Focus questions for the numeracy community	http://dx.doi.org/10.5038/1936-4660.3.2.5
Vacher and Lardner	2011	Spreadsheets Across the Curriculum, 3: Finding a list of mathematical skills for quantitative literacy empirically	http://dx.doi.org/10.5038/1936-4660.4.1.5
Kosko and Wilkins	2011	Communicating quantitative literacy: An examination of open-ended assessment items in TIMSS, NALS, IALS, and PISA	http://dx.doi.org/10.5038/1936-4660.4.2.3
Ward et al.	2011	Development of an assessment of quantitative literacy for Miami University	http://dx.doi.org/10.5038/1936-4660.4.2.4
Sikorskii et al.	2011	Quantitative literacy at Michigan State University, 1: Development and initial evaluation of the assessment	http://dx.doi.org/10.5038/1936-4660.4.2.5
Gilliland et al.	2011	Quantitative Literacy at Michigan State University, 2: Connection to financial literacy	http://dx.doi.org/10.5038/1936-4660.4.2.6
Hassad	2011	Constructivist and behaviorist approaches: Development and initial evaluation of a teaching practice scale for introductory statistics at the college level	http://dx.doi.org/10.5038/1936-4660.4.2.7
Boersma et al.	2011	Quantitative Reasoning in the Contemporary World, 3: Assessing student learning	http://dx.doi.org/10.5038/1936-4660.4.2.8
Sundre et al.	2012	Motivation for achievement and attitudes toward mathematics instruction in a required calculus course at the Norwegian University of Science and Technology	http://dx.doi.org/10.5038/1936-4660.5.1.4
Christoffel and Mji	2012	Assessment of numeracy levels of mine workers in South African chrome mines	http://dx.doi.org/10.5038/1936-4660.5.2.4
Lehto and Vacher	2012	Spreadsheets Across the Curriculum, 4: Evidence of student learning and attitudes about spreadsheets in a physical geology course	http://dx.doi.org/10.5038/1936-4660.5.2.5

C. Case studies

Rheinlander et al.	2008	Teachers talk: Pressure points in the K-8 mathematics curriculum	http://dx.doi.org/10.5038/1936-4660.1.1.4
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May et al.	2008	Development of case stories by interviewing students about their critical moments in science, math, and engineering classes	http://dx.doi.org/10.5038/1936-4660.1.1.5
Steele and Kiliç-Bahi	2008	Quantitative Literacy Across the Curriculum: A case study	http://dx.doi.org/10.5038/1936-4660.1.2.3
Sweet et al.	2008	Using local data to advance quantitative literacy	http://dx.doi.org/10.5038/1936-4660.1.2.4
Boersma and Willard	2008	False positives and referral bias: Content for a quantitative literacy course	http://dx.doi.org/10.5038/1936-4660.1.2.5
Karaali	2008	Word problems: Reflections on embedding quantitative literacy in a calculus course	http://dx.doi.org/10.5038/1936-4660.1.2.6
Bressoud	2009	Establishing the Quantitative Thinking Program at Macalester	http://dx.doi.org/10.5038/1936-4660.2.1.3
Grawe and Rutz	2009	Integration with writing programs: A strategy for quantitative reasoning program development	http://dx.doi.org/10.5038/1936-4660.2.2.2
Latiolais and Laurence	2009	Engaging math-avoidant college students	http://dx.doi.org/10.5038/1936-4660.2.2.5
Karaali et al.	2010	Envisioning a Quantitative Studies Center: A liberal arts perspective	http://dx.doi.org/10.5038/1936-4660.3.1.4
Sorey et al.	2010	An activity promoting the practice of quantitative literacy for pre- and in-service teachers of mathematics and science	http://dx.doi.org/10.5038/1936-4660.3.1.6
Catalano	2010	College Algebra in Context: A project incorporating social issues	http://dx.doi.org/10.5038/1936-4660.3.1.7
Dingman and Madison	2010	Quantitative Reasoning in the Contemporary World, 1: The course and its challenges:	http://dx.doi.org/10.5038/1936-4660.3.2.4
Vacher and Lardner	2010	Spreadsheets Across the Curriculum, 1: The idea and the resource	http://dx.doi.org/10.5038/1936-4660.3.2.6
Gaze	2010	Creating a Masters in Numeracy program	http://dx.doi.org/10.5038/1936-4660.3.2.8
Watson	2011	Personal and Professional Numeracy: A unit for pre-service teachers at the University of Tasmania	http://dx.doi.org/10.5038/1936-4660.4.1.2
Rheinlander and Wallace	2011	Calculus, Biology and Medicine: A case study in quantitative literacy for science students	http://dx.doi.org/10.5038/1936-4660.4.1.3
Wetzel	2011	Spreadsheets Across the Curriculum, 2: Assessing our success with students at Eckerd College	http://dx.doi.org/10.5038/1936-4660.4.1.4
Henrich and Lee	2011	Reducing math anxiety: Findings from incorporating service learning into a quantitative reasoning course at Seattle University,	http://dx.doi.org/10.5038/1936-4660.4.2.9

Frith	2012	Quantitative literacy interventions at University of Cape Town: Effects of separation from academic disciplines	http://dx.doi.org/10.5038/1936-4660.5.1.3
Jungck	2012	Incorporating quantitative reasoning in common core courses: Mathematics for <i>The Ghost Map</i>	http://dx.doi.org/10.5038/1936-4660.5.1.7
Courtland et al.	2012	Introducing geoscience students to numerical modeling of volcanic hazards: The example of Tephra2 on VHub.org	http://dx.doi.org/10.5038/1936-4660.5.2.6
D. <u>Essays, editorials and expository pieces</u>			
Best	2008	Birds—dead and deadly: Why numeracy needs to address social construction	http://dx.doi.org/10.5038/1936-4660.1.1.6
Madison	2009	All the more reason for QR across the curriculum (Editorial)	http://dx.doi.org/10.5038/1936-4660.2.1.1
Madison and Steen	2009	Confronting challenges, overcoming obstacles: A conversation about quantitative literacy	http://dx.doi.org/10.5038/1936-4660.2.1.2
Taylor	2009	Assessing quantitative reasoning (Editorial)	http://dx.doi.org/10.5038/1936-4660.2.2.1
Wallace et al.	2009	Quantitative literacy assessments: An introduction to testing tests	http://dx.doi.org/10.5038/1936-4660.2.2.3
Catalano et al.	2009	Measuring resource inequality: The Gini coefficient	http://dx.doi.org/10.5038/1936-4660.2.2.4
Best	2010	Confessions of a weak tie (Editorial)	http://dx.doi.org/10.5038/1936-4660.3.1.2
Chavez	2010	<i>Numeracy</i> : Open-access publishing to reduce the cost of scholarly journals	http://dx.doi.org/10.5038/1936-4660.3.1.8
Meisels	2010	Science literacy: Hand in glove with numeracy (Editorial)	http://dx.doi.org/10.5038/1936-4660.3.2.1
Gillman	2010	Reorganizing school mathematics for quantitative literacy	http://dx.doi.org/10.5038/1936-4660.3.2.7
Steen and Maidson	2011	Reflections on the tenth anniversary of <i>Mathematics and Democracy</i> (Editorial)	http://dx.doi.org/10.5038/1936-4660.4.1.1
Vacher	2011	A LEAP Forward for Quantitative Literacy (Editorial)	http://dx.doi.org/10.5038/1936-4660.4.2.1
Connor	2011	A quantitative literacy view of natural disasters and nuclear facilities (Editorial)	http://dx.doi.org/10.5038/1936-4660.4.2.2
Diefenderfer	2012	The joy of quantitative reasoning (Editorial)	http://dx.doi.org/10.5038/1936-4660.5.1.1
Pfaff and Seltzer	2012	Period life tables: A resource for quantitative literacy	http://dx.doi.org/10.5038/1936-4660.5.1.5
Madison	2012	If only math majors could write...	http://dx.doi.org/10.5038/1936-4660.5.1.6

Taylor	2012	Quantitative reasoning and sustainability (Editorial)	http://dx.doi.org/10.5038/1936-4660.5.2.1
E. <u>Book reviews</u>			
Vacher	2008	Review of <i>The Triumph of Numbers</i> by I. B. Cohen	http://dx.doi.org/10.5038/1936-4660.1.1.7
Montgomery	2008	Review of <i>Quantitative Reasoning: Tools for Today's Informed Citizen</i> by A. Sevilla and K. Somers	http://dx.doi.org/10.5038/1936-4660.1.2.7
Lutsky	2009	Review of <i>The Chicago Guide to Writing about Numbers</i> by Jane E. Miller	http://dx.doi.org/10.5038/1936-4660.2.1.6
Mast	2009	Review of <i>Calculation vs. Context: Quantitative Literacy and Its Implications for Teacher Education</i> by Bernard L. Madison and Lynn Arthur Steen (Editors)	http://dx.doi.org/10.5038/1936-4660.2.2.6
Swingle	2009	Review of <i>Stat-Spotting: A Field Guide to Identifying Dubious Data</i> by Joel Best	http://dx.doi.org/10.5038/1936-4660.2.2.7
Gaze	2009	Review of <i>Super Crunchers</i> by Ian Ayers	http://dx.doi.org/10.5038/1936-4660.2.2.8
Root	2010	Two popular books for quantitative literacy: <i>What the Numbers Say</i> , and <i>The Numbers Game</i>	http://dx.doi.org/10.5038/1936-4660.3.1.9
Montgomery	2011	Review of <i>Sex, Drugs and Body Counts: The Politics of Numbers in Global Crime and Conflict</i> , edited by Peter Andreas and Kelly M. Greenhill	http://dx.doi.org/10.5038/1936-4660.4.1.8
Gaze	2012	Review of <i>Math for Life</i> by Jeffrey Bennett	http://dx.doi.org/10.5038/1936-4660.5.2.7
F. <u>Column: Parts of the Whole</u>			
Wallace	2008	Parts of the whole: Teachers and the work they do	http://dx.doi.org/10.5038/1936-4660.1.2.8
Wallace	2009	Parts of the whole: Is everything equally important?	http://dx.doi.org/10.5038/1936-4660.2.1.7
Wallace	2009	Parts of the whole: Approaching education as a system	http://dx.doi.org/10.5038/1936-4660.2.2.9
Wallace	2010	Parts of the whole: Observing the state of the system	http://dx.doi.org/10.5038/1936-4660.3.1.10
Wallace	2010	Parts of the whole: Thinking about variance: Standards, targets, tracking, and other thoughts	http://dx.doi.org/10.5038/1936-4660.3.2.9
Wallace	2011	Parts of the whole: Cognition, schemas and quantitative reasoning	http://dx.doi.org/10.5038/1936-4660.4.1.9
Wallace	2011	Parts of the whole: An algebra lesson	http://dx.doi.org/10.5038/1936-4660.4.2.10

Wallace	2012	Parts of the whole: Learn more, learn better	http://dx.doi.org/10.5038/1936-4660.5.1.8
Wallace	2012	Parts of the whole: The virtue of books	http://dx.doi.org/10.5038/1936-4660.5.2.8
G. Editorials about the journal			
Vacher and Wallace	2008	The scope of <i>Numeracy</i>	http://dx.doi.org/10.5038/1936-4660.1.1.1
Vacher	2008	Abstracts for <i>Numeracy</i>	http://dx.doi.org/10.5038/1936-4660.1.2.1
Vacher	2010	Five thousand downloads	http://dx.doi.org/10.5038/1936-4660.3.1.1

Table 2
Subjects

A. Educational assessment			
Vacher and Chavez	2009	Quantitative literacy on the Web of Science, 2 – Mining the health numeracy literature for assessment items	http://dx.doi.org/10.5038/1936-4660.2.1.5
Taylor	2009	Assessing quantitative reasoning (Editorial)	http://dx.doi.org/10.5038/1936-4660.2.2.1
Wallace et al.	2009	Quantitative literacy assessments: An introduction to testing tests	http://dx.doi.org/10.5038/1936-4660.2.2.3
Grawe et al.	2010	A rubric for assessing quantitative reasoning in written arguments	http://dx.doi.org/10.5038/1936-4660.3.1.3
Sundre and Thelk	2010	Advancing Assessment of Quantitative and Scientific Reasoning	http://dx.doi.org/10.5038/1936-4660.3.2.2
Steele and Kilic-Bahi	2010	Quantitative literacy: Does it work? Evaluation of student outcomes at Colby-Sawyer College	http://dx.doi.org/10.5038/1936-4660.3.2.3
Wetzel	2011	Spreadsheets Across the Curriculum, 2: Assessing our success with students at Eckerd College	http://dx.doi.org/10.5038/1936-4660.4.1.4
Kosko and Wilkins	2011	Communicating quantitative literacy: An examination of open-ended assessment items in TIMSS, NALS, IALS, and PISA	http://dx.doi.org/10.5038/1936-4660.4.2.3
Ward et al.	2011	Development of an assessment of quantitative literacy for Miami University	http://dx.doi.org/10.5038/1936-4660.4.2.4
Sikorskii et al.	2011	Quantitative literacy at Michigan State University, 1: Development and initial evaluation of the assessment	http://dx.doi.org/10.5038/1936-4660.4.2.5
Hassad	2011	Constructivist and behaviorist approaches: Development and initial evaluation of a teaching practice scale for introductory statistics at the	http://dx.doi.org/10.5038/1936-4660.4.2.7

Boersma et al.	2011	college level Quantitative Reasoning in the Contemporary World, 3: Assessing student learning	http://dx.doi.org/10.5038/1936-4660.4.2.8
Lehto and Vacher	2012	Spreadsheets Across the Curriculum, 4: Evidence of student learning and attitudes about spreadsheets in a physical geology course	http://dx.doi.org/10.5038/1936-4660.5.2.5
B. <u>QL and writing (including media, journalism, scholarly publishing)</u>			
Lutsky	2009	Review of <i>The Chicago Guide to Writing about Numbers</i> by Jane E. Miller	http://dx.doi.org/10.5038/1936-4660.2.1.6
Grawe and Rutz	2009	Integration with writing programs: A strategy for quantitative reasoning program development	http://dx.doi.org/10.5038/1936-4660.2.2.2
Swingle	2009	Review of <i>Stat-Spotting: A Field Guide to Identifying Dubious Data</i> by Joel Best	http://dx.doi.org/10.5038/1936-4660.2.2.7
Grawe et al.	2010	A rubric for assessing quantitative reasoning in written arguments	http://dx.doi.org/10.5038/1936-4660.3.1.3
Chavez	2010	<i>Numeracy</i> : Open-access publishing to reduce the cost of scholarly journals	http://dx.doi.org/10.5038/1936-4660.3.1.8
Dingman and Madison	2010	Quantitative Reasoning in the Contemporary World, 1: The course and its challenges:	http://dx.doi.org/10.5038/1936-4660.3.2.4
Madison and Dingman	2010	Quantitative Reasoning in the Contemporary World, 2: Focus questions for the numeracy community	http://dx.doi.org/10.5038/1936-4660.3.2.5
Montgomery	2011	Review of <i>Sex, Drugs and Body Counts: The Politics of Numbers in Global Crime and Conflict</i> , edited by Peter Andreas and Kelly M. Greenhill	http://dx.doi.org/10.5038/1936-4660.4.1.8
Kosko and Wilkins	2011	Communicating quantitative literacy: An examination of open-ended assessment items in TIMSS, NALS, IALS, and PISA	http://dx.doi.org/10.5038/1936-4660.4.2.3
Boersma et al.	2011	Quantitative Reasoning in the Contemporary World, 3: Assessing student learning	http://dx.doi.org/10.5038/1936-4660.4.2.8
Madison	2012	If only math majors could write...	http://dx.doi.org/10.5038/1936-4660.5.1.6
Jungck	2012	Incorporating quantitative reasoning in common core courses: Mathematics for <i>The Ghost Map</i>	http://dx.doi.org/10.5038/1936-4660.5.1.7
C. <u>What is QL (or QR or numeracy)?</u>			
Madison and Steen	2008	Evolution of numeracy and the National Numeracy Network	http://dx.doi.org/10.5038/1936-4660.1.1.2
Vacher	2008	Review of <i>The Triumph of Numbers</i> by I. B. Cohen	http://dx.doi.org/10.5038/1936-4660.1.1.7
Vacher and Chavez	2008	Quantitative literacy on the Web of Science, 1: The bibliography and its role in the history of this journal	http://dx.doi.org/10.5038/1936-4660.1.2.2

Steele and Kiliç-Bahi	2008	Quantitative Literacy Across the Curriculum: A case study	http://dx.doi.org/10.5038/1936-4660.1.2.3
Montgomery	2008	Review of <i>Quantitative Reasoning: Tools for Today's Informed Citizen</i> by A. Sevilla and K. Somers	http://dx.doi.org/10.5038/1936-4660.1.2.7
Madison	2009	All the more reason for QR across the curriculum (Editorial)	http://dx.doi.org/10.5038/1936-4660.2.1.1
Madison and Steen	2009	Confronting challenges, overcoming obstacles: A conversation about quantitative literacy	http://dx.doi.org/10.5038/1936-4660.2.1.2
Bressoud	2009	Establishing the Quantitative Thinking Program at Macalester	http://dx.doi.org/10.5038/1936-4660.2.1.3
Grawe and Rutz	2009	Integration with writing programs: A strategy for quantitative reasoning program development	http://dx.doi.org/10.5038/1936-4660.2.2.2
Mast	2009	Review of <i>Calculation vs. Context: Quantitative Literacy and Its Implications for Teacher Education</i> by Bernard L. Madison and Lynn Arthur Steen (Editors)	http://dx.doi.org/10.5038/1936-4660.2.2.6
Gaze	2009	Review of <i>Super Crunchers</i> by Ian Ayers	http://dx.doi.org/10.5038/1936-4660.2.2.8
Root	2010	Two popular books for quantitative literacy: <i>What the Numbers Say</i> , and <i>The Numbers Game</i>	http://dx.doi.org/10.5038/1936-4660.3.1.9
Gillman	2010	Reorganizing school mathematics for quantitative literacy	http://dx.doi.org/10.5038/1936-4660.3.2.7
Gaze	2010	Creating a Masters in Numeracy program	http://dx.doi.org/10.5038/1936-4660.3.2.8
Steen and Madison	2011	Reflections on the tenth anniversary of <i>Mathematics and Democracy</i> (Editorial)	http://dx.doi.org/10.5038/1936-4660.4.1.1
Vacher and Lardner	2011	Spreadsheets Across the Curriculum, 3: Finding a list of mathematical skills for quantitative literacy empirically	http://dx.doi.org/10.5038/1936-4660.4.1.5
Vacher	2011	A LEAP Forward for Quantitative Literacy (Editorial)	http://dx.doi.org/10.5038/1936-4660.4.2.1
Diefenderfer	2012	The joy of quantitative reasoning (Editorial)	http://dx.doi.org/10.5038/1936-4660.5.1.1
Hillyard	2012	Comparative study of the numeracy education and Writing Across the Curriculum movements: Ideas for future growth	http://dx.doi.org/10.5038/1936-4660.5.2.2
Gaze	2012	Review of <i>Math for Life</i> by Jeffrey Bennett	http://dx.doi.org/10.5038/1936-4660.5.2.7
D. <u>QL courses and curricula in math and math ed departments</u>			
Boersma and Willard	2008	False positives and referral bias: Content for a quantitative literacy course	http://dx.doi.org/10.5038/1936-4660.1.2.5

Montgomery	2008	Review of <i>Quantitative Reasoning: Tools for Today's Informed Citizen</i> by A. Sevilla and K. Somers	http://dx.doi.org/10.5038/1936-4660.1.2.7
Catalano et al.	2009	Measuring resource inequality: The Gini coefficient	http://dx.doi.org/10.5038/1936-4660.2.2.4
Dingman and Madison	2010	Quantitative Reasoning in the Contemporary World, 1: The course and its challenges:	http://dx.doi.org/10.5038/1936-4660.3.2.4
Madison and Dingman	2010	Quantitative Reasoning in the Contemporary World, 2: Focus questions for the numeracy community	http://dx.doi.org/10.5038/1936-4660.3.2.5
Gillman	2010	Reorganizing school mathematics for quantitative literacy	http://dx.doi.org/10.5038/1936-4660.3.2.7
Gaze	2010	Creating a Masters in Numeracy program	http://dx.doi.org/10.5038/1936-4660.3.2.8
Watson	2011	Personal and Professional Numeracy: A unit for pre-service teachers at the University of Tasmania	http://dx.doi.org/10.5038/1936-4660.4.1.2
Boersma et al.	2011	Quantitative Reasoning in the Contemporary World, 3: Assessing student learning	http://dx.doi.org/10.5038/1936-4660.4.2.8
Henrich and Lee	2011	Reducing math anxiety: Findings from incorporating service learning into a quantitative reasoning course at Seattle University,	http://dx.doi.org/10.5038/1936-4660.4.2.9
Pfaff and Seltzer	2012	Period life tables: A resource for quantitative literacy	http://dx.doi.org/10.5038/1936-4660.5.1.5
Gaze	2012	Review of <i>Math for Life</i> by Jeffrey Bennett	http://dx.doi.org/10.5038/1936-4660.5.2.7
E. <u>QL across the curriculum</u>			
Steele and Kiliç-Bahi	2008	Quantitative Literacy Across the Curriculum: A case study	http://dx.doi.org/10.5038/1936-4660.1.2.3
Madison	2009	All the more reason for QR across the curriculum (Editorial)	http://dx.doi.org/10.5038/1936-4660.2.1.1
Bressoud	2009	Establishing the Quantitative Thinking Program at Macalester	http://dx.doi.org/10.5038/1936-4660.2.1.3
Grawe and Rutz	2009	Integration with writing programs: A strategy for quantitative reasoning program development	http://dx.doi.org/10.5038/1936-4660.2.2.2
Steele and Kiliç-Bahi	2010	Quantitative literacy: Does it work? Evaluation of student outcomes at Colby-Sawyer College	http://dx.doi.org/10.5038/1936-4660.3.2.3
Vacher and Lardner	2010	Spreadsheets Across the Curriculum, 1: The idea and the resource	http://dx.doi.org/10.5038/1936-4660.3.2.6
Vacher	2011	A LEAP Forward for Quantitative Literacy (Editorial)	http://dx.doi.org/10.5038/1936-4660.4.2.1
Diefenderfer	2012	The joy of quantitative reasoning (Editorial)	http://dx.doi.org/10.5038/1936-4660.5.1.1

Frith	2012	Quantitative literacy interventions at University of Cape Town: Effects of separation from academic disciplines,	http://dx.doi.org/10.5038/1936-4660.5.1.3
Jungck	2012	Incorporating quantitative reasoning in common core courses: Mathematics for <i>The Ghost Map</i>	http://dx.doi.org/10.5038/1936-4660.5.1.7
Taylor	2012	Quantitative reasoning and sustainability (Editorial)	http://dx.doi.org/10.5038/1936-4660.5.2.1
Hillyard	2012	Comparative study of the numeracy education and Writing Across the Curriculum movements: Ideas for future growth	http://dx.doi.org/10.5038/1936-4660.5.2.2
F. <u>QL centers</u>			
Karaali et al.	2010	Envisioning a Quantitative Studies Center: A liberal arts perspective	http://dx.doi.org/10.5038/1936-4660.3.1.4
Frith	2012	Quantitative literacy interventions at University of Cape Town: Effects of separation from academic disciplines,	http://dx.doi.org/10.5038/1936-4660.5.1.3
G. <u>Algebra and calculus education</u>			
Karaali	2008	Word problems: Reflections on embedding quantitative literacy in a calculus course	http://dx.doi.org/10.5038/1936-4660.1.2.6
Catalano	2010	College Algebra in Context: A project incorporating social issues	http://dx.doi.org/10.5038/1936-4660.3.1.7
Rheinlander and Wallace	2011	Calculus, Biology and Medicine: A case study in quantitative literacy for science students	http://dx.doi.org/10.5038/1936-4660.4.1.3
Sundre et al.	2012	Motivation for achievement and attitudes toward mathematics instruction in a required calculus course at the Norwegian University of Science and Technology	http://dx.doi.org/10.5038/1936-4660.5.1.4
Gaze	2012	Review of <i>Math for Life</i> by Jeffrey Bennett	http://dx.doi.org/10.5038/1936-4660.5.2.7
H. <u>Statistics education</u>			
Guardiola et al.	2010	Are statistics labs worth the effort? – Comparison of introductory statistics courses using different teaching methods	http://dx.doi.org/10.5038/1936-4660.3.1.5
Hassad	2011	Constructivist and behaviorist approaches: Development and initial evaluation of a teaching practice scale for introductory statistics at the college level	http://dx.doi.org/10.5038/1936-4660.4.2.7
I. <u>QL and science/engineering</u>			
May et al.	2008	Development of case stories by interviewing students about their critical moments in science, math, and engineering classes	http://dx.doi.org/10.5038/1936-4660.1.1.5
Wenner et al.	2009	The case for infusing quantitative literacy into introductory geoscience courses	http://dx.doi.org/10.5038/1936-4660.2.1.4

Sorey et al.	2010	An activity promoting the practice of quantitative literacy for pre- and in-service teachers of mathematics and science	http://dx.doi.org/10.5038/1936-4660.3.1.6
Meisels	2010	Science literacy: Hand in glove with numeracy (Editorial)	http://dx.doi.org/10.5038/1936-4660.3.2.1
Rheinlander and Wallace	2011	Calculus, Biology and Medicine: A case study in quantitative literacy for science students	http://dx.doi.org/10.5038/1936-4660.4.1.3
Connor	2011	A quantitative literacy view of natural disasters and nuclear facilities (Editorial)	http://dx.doi.org/10.5038/1936-4660.4.2.2
Sundre et al.	2012	Motivation for achievement and attitudes toward mathematics instruction in a required calculus course at the Norwegian University of Science and Technology	http://dx.doi.org/10.5038/1936-4660.5.1.4
Jungck	2012	Incorporating quantitative reasoning in common core courses: Mathematics for <i>The Ghost Map</i>	http://dx.doi.org/10.5038/1936-4660.5.1.7
Taylor	2012	Quantitative reasoning and sustainability (Editorial)	http://dx.doi.org/10.5038/1936-4660.5.2.1
Courtland et al.	2012	Introducing geoscience students to numerical modeling of volcanic hazards: The example of Tephra2 on VHub.org	http://dx.doi.org/10.5038/1936-4660.5.2.6
J. <u>QL and social sciences</u>			
Best	2008	Birds–dead and deadly: Why numeracy needs to address social construction	http://dx.doi.org/10.5038/1936-4660.1.1.6
Sweet et al.	2008	Using local data to advance quantitative literacy	http://dx.doi.org/10.5038/1936-4660.1.2.4
Catalano et al.	2009	Measuring resource inequality: The Gini coefficient	http://dx.doi.org/10.5038/1936-4660.2.2.4
Swingle	2009	Review of <i>Stat-Spotting: A Field Guide to Identifying Dubious Data</i> by Joel Best	http://dx.doi.org/10.5038/1936-4660.2.2.7
Best	2010	Confessions of a weak tie (Editorial)	http://dx.doi.org/10.5038/1936-4660.3.1.2
Catalano	2010	College Algebra in Context: A project incorporating social issues	http://dx.doi.org/10.5038/1936-4660.3.1.7
Montgomery	2011	Review of <i>Sex, Drugs and Body Counts: The Politics of Numbers in Global Crime and Conflict</i> , edited by Peter Andreas and Kelly M. Greenhill	http://dx.doi.org/10.5038/1936-4660.4.1.8
Pfaff and Seltzer	2012	Period life tables: A resource for quantitative literacy	http://dx.doi.org/10.5038/1936-4660.5.1.5
K. <u>Financial literacy</u>			
Miller	2011	Four popular books on consumer debt: A context for quantitative literacy	http://dx.doi.org/10.5038/1936-4660.4.1.7

Gilliland et al.	2011	Quantitative Literacy at Michigan State University, 2: Connection to financial literacy	http://dx.doi.org/10.5038/1936-4660.4.2.6
Lusardi	2012	Numeracy, financial literacy, and financial decision-making	http://dx.doi.org/10.5038/1936-4660.5.1.2
L. <u>Health numeracy</u>			
Boersma and Willard	2008	False positives and referral bias: Content for a quantitative literacy course	http://dx.doi.org/10.5038/1936-4660.1.2.5
Vacher and Chavez	2009	Quantitative literacy on the Web of Science, 2 – Mining the health numeracy literature for assessment items	http://dx.doi.org/10.5038/1936-4660.2.1.5
Jungck	2012	Incorporating quantitative reasoning in common core courses: Mathematics for <i>The Ghost Map</i>	http://dx.doi.org/10.5038/1936-4660.5.1.7
M. <u>Math anxiety</u>			
Latiolais and Laurence	2009	Engaging math-avoidant college students	http://dx.doi.org/10.5038/1936-4660.2.2.5
Henrich and Lee	2011	Reducing math anxiety: Findings from incorporating service learning into a quantitative reasoning course at Seattle University,	http://dx.doi.org/10.5038/1936-4660.4.2.9
N. <u>Cognition</u>			
Wallace	2011	Parts of the whole: Cognition, schemas and quantitative reasoning	http://dx.doi.org/10.5038/1936-4660.4.1.9
MacLellan	2012	Number sense: The underpinning understanding for early quantitative literacy	http://dx.doi.org/10.5038/1936-4660.5.2.3