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Remembering Lynn Steen: A Steen-*Numeracy* Citation Index (2008-2015)

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Remembering Lynn Steen: A Steen-Numeracy Citation Index (2008-2015)

Abstract

This editorial memorializes Lynn Arthur Steen (1941-2015) with a bibliographic resource that indexes all of his writings (papers, books, edited volumes, and papers contained therein) that are cited in papers in *Numeracy*. The citation index contains 67 cited works, each accompanied with a list of linked *Numeracy* papers that cite them. All told, there are 68 such citing papers (called sources); they cite the 67 cited works a total of 290 times and are listed alphabetically in a source index with links. The paired citation and source indexes provide a vehicle for easy browsing by which those familiar with Lynn Steen's works can easily be refreshed and reminded, while those who are new to QL can quickly come to an understanding of the importance of the concept and get an appreciation of Lynn Steen's impact on the field. It is worth emphasizing that all of the source papers and many of the cited works are open access. It is hoped that this resource will facilitate hours of happy and thought-provoking reading and a deeper understanding of quantitative literacy.

Keywords

mathematicians, memorial, bibliography, quantitative literacy, bibliometrics, St. Olaf College

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Cover Page Footnote

Len Vacher is a professor of geology in the School of Geosciences at the University of South Florida, a fellow of the Geological Society of America, a lifetime member of the National Association of Geoscience Teachers, and a member of the Mathematical Association of America and the American Statistical Association. A member of the charter board of the NNN, he has been co-editor of this journal since its beginning.

Lynn Arthur Steen (1941-2015) was a thought leader for our field (take your pick: numeracy, quantitative literacy, quantitative reasoning¹); a legendary mathematics professor at St. Olaf College in Northfield MN (1965-2009)²; an influential president of the Mathematical Association of America (1985-1986)³; and an author/editor of benchmark books including

- the calculus reform movement's *Calculus for a New Century, a Pump not a Filter* (1987).⁴
- the Mathematical Sciences Education Board's *Everybody Counts: A Report to the Nation on the Future of Mathematics Education* (1989),⁵ which set the stage for the NCTM *Curriculum and Evaluation Standards for School Mathematics*.⁶
- his renowned (for us) trilogy on quantitative literacy⁷:
 - *Why Numbers Count: Quantitative Literacy for Tomorrow's America* (1997),⁸
 - *Mathematics and Democracy* (2001),⁹
 - *Achieving Quantitative Literacy* (2004).¹⁰

Lynn Steen was also a generous friend and valued associate editor and reviewer for this journal – right from our start. I well remember his telling me as we were embarking on the venture that this (i.e., a scholarly journal) was just the sort of grass-roots development he was hoping to see for QL and the National Numeracy Network. He (with Bernie Madison, NNN's first president) gave us three papers:

- Madison, Bernard L. and Lynn Arthur Steen. 2008. Evolution of numeracy and the National Numeracy Network. *Numeracy* 1(2), article 2.
- Madison, Bernard L. and Lynn Arthur Steen. 2009. Confronting challenges, overcoming obstacles: A conversation about quantitative literacy. *Numeracy* 2(1): Article 2.
- Steen, Lynn Arthur and Bernard L. Madison. 2011. Reflections on the tenth Anniversary of *Mathematics and Democracy*. *Numeracy*, 4(1): Article 1.

¹ see Karaali et al. in this issue for a critical and thoughtful review of the terminology.

² See <http://www.stolaf.edu/people/steen/index.html> for a most informative web site.

³ See <http://www.maa.org/about-maa/governance/maa-presidents/lynn-arthur-steen-1985-1986-maa-president> for notes on his presidency.

⁴ MAA Notes. ISBN: 978-0883850589

⁵ National Academies Press. ISBN: 978-0309039772.

<http://www.nap.edu/catalog/1199/everybody-counts-a-report-to-the-nation-on-the-future>.

⁶ See http://www.mathcurriculumcenter.org/PDFS/CCM/summaries/everybody_counts_summary.pdf for significance of the report.

⁷ For context see <http://www.stolaf.edu/people/steen/Professional/qlit.html>

⁸ College Board. ISBN: 978-0874475777

⁹ National Council on Education and the Disciplines (Woodrow Wilson Fellowship Foundation). ISBN: 978-0970954701.

¹⁰ Mathematics Association of America. ISBN: 978-0883858165.

Our friend's great influence came from deep, clear, insightful thinking and eloquent, persuasive writing – all of which are evidenced in great quantities in a beautifully organized page on St. Olaf's web site about Lynn Steen – “Selected Papers.”¹¹ This hugely valuable resource lists and links to 132 of his *open-access* articles, essays, and expository papers in both alphabetical and chronological (1970-2012) order. This resource is both a tool and a library, and if you enter the library, be prepared to remain for a while. It provides a magnificent collection of good reads on a wide variety of interesting topics (although some of the early ones are pretty hairy to this non-mathematician).

As a tribute to Lynn Steen, this editorial aims to contribute another resource to guide readers to his writings: a citation index of papers in *Numeracy* that refer to Steen's publications. Like the old, printed *Science Citation Index (SCI)* published by the Institute for Scientific Information (now the online Web of Science), two lists come into play.¹² The first (Appendix A, here) is a list of cited papers (including books and papers in books); it is called the Citation Index Section. The second (Appendix B) is a list of citing papers and is called the Source Index Section. For our Steen-*Numeracy* Citation Index (SNCI), the Citation Index Section contains articles authored and coauthored by Steen; books written, edited, and co-edited by Steen; and papers included in books edited or co-edited by Steen. With each, there is a list of the papers that cite the cited item. The Source Index Section lists these papers (references) that cite the cited items. For our SNCI, these papers are all from *Numeracy* and therefore open access. To qualify for Appendix A, the item must be cited by a paper in Appendix B. To facilitate access, all the *Numeracy* papers are linked in both Appendices A and B to their sources through their permanent DOIs.

By the numbers, *Numeracy* has published a total of 151 papers (articles, perspectives, notes, book reviews, editorials, and Dorothy Wallace's column) in its first eight volumes (2008-2015). Sixty-eight of these *Numeracy* pieces are included in Appendix B as sources of citations to the cited Steen works included in Appendix A. There are 67 such cited works included, and they are cited a total of 290 times. The influence of Lynn Steen on our field and on the writings in this journal is obvious. Clearly he epitomizes Google's definition of *thought leader*: one whose views on a subject are taken to be authoritative and influential.

The distribution of citations is by no means uniform, and it does tell a story. The top 18 works (of 67, or 27%) ranked by number of citations are shown in Table 1, and they drew a total of 216 (of 290, or 74.5%) of the citations listed in Appendix A. The most widely cited works introduce the concept of quantitative

¹¹ <http://www.stolaf.edu/people/steen/Publications/papers.html>

¹² Eugene Garfield, 1997. Concept of Citation Indexing: A Unique and Innovative Tool for Navigating the Research Literature. Speech presented at Far Eastern Sate University, Vladivostok – September 4, 1997. <http://www.garfield.library.upenn.edu/papers/vladivostok.html>

literacy; make the case that it is important for an informed society and, therefore, for school, college, and teacher education; and, in the case of edited volumes, contain chapters elaborating on a variety of issues. I sort nine or half of the works in Table 1 into this general QL case-making and fleshing-out category, and it is understandable that they would be relevant to introductory and scene-setting passages in a wide variety of papers in *Numeracy*. These nine works account for 164 or 56.6% of the 290 citations in the Citation Index (Appendix A).

Table 1.
The 18 Most-Cited Works from the Citation List of Appendix A.

Rank order	Citations	Title	Reference	Type
1	49	<i>Mathematics and democracy: The case for quantitative literacy</i>	Steen 2001	Edited volume
2	28	<i>Quantitative literacy: Why numeracy matters for schools and colleges</i>	Madison and Steen 2003	Edited volume
3	24	<i>Calculation vs. Content: Quantitative literacy and its implications for teacher education</i>	Madison and Steen 2008	Edited volume
4	21	<i>Achieving quantitative literacy: An urgent challenge for higher education</i>	Steen 2004	Book
5	18	Evolution of numeracy and the National Numeracy Network	Steen and Madison 2008	Article in <i>Numeracy</i>
6	12	<i>Why numbers count: Quantitative literacy of tomorrow's America</i>	Steen 2001	Edited volume
7	9	Arguing with numbers: Teaching quantitative reasoning through argument and writing	Lutsky 2008	Article in Madison and Steen 2008
8	8	Quantitative literacy and school mathematics: Percentages and fractions	Schild 2008	Article in Madison and Steen 2008
9	6	The third R in literacy	Richardson and McCallum 2008	Article in Madison and Steen 2008
9	6	Preparing students for the business of the real (and highly quantitative) world	Taylor 2008	Article in Madison and Steen 2008
11	5	Achieving numeracy: The challenge of implementation	Hughes-Hallett 2001	Article in Steen 2001
11	5	The role of mathematics courses in the development of quantitative literacy	Hughes-Hallett 2003	Article in Madison and Steen 2003
11	5	Reflections on quantitative reasoning: An assessment perspective	Shavelson 2008	Article in Madison and Steen 2008
14	4	Articulation and quantitative literacy: A view from inside mathematics	Madison 2003	Article in Madison and Steen 2003
14	4	Confronting challenges, overcoming obstacles: A conversation about quantitative literacy	Madison and Steen 2009	Article in <i>Numeracy</i>
14	4	Everybody counts: A report to the nation on the future of mathematics education	National Research Council 1989	National Academy Press
14	4	Numeracy: The new literacy for a data-drenched society	Steen 1999	Article in <i>Educational Leadership</i>
14	4	'Get real!' Assessing for quantitative literacy	Wiggins 2003	Article in Madison and Steen 2003

The other nine works in Table 1 (Lutsky 2008; Schild 2008; Richardson and McCallum 2008; Taylor, 2008; Hughes-Hallett 2001, 2003; Shavelson 2008; Madison 2003; and Wiggins 2003) deal with more specific issues and account for 52, or 17.9%, of the 290 citations. That leaves the other 49 works (of 67 or 73%) from Appendix A that are not listed in Table 1: they were each cited at least once but no more than three times – aggregating to a total of 74 of the 290 (or 25.6%)

total citations in Appendix A. This skew is typical of citation bibliometrics.¹³ And, lest we forget, more than half of the papers published in *Numeracy* over this time frame did not cite Steen or his edited volumes and do not appear as sources in either Appendix A or B. I very much doubt that authors of those non-citing papers are unaware of his work.

By and large, it appears that *Numeracy* has moved beyond making the case and is focusing on making progress through research, analyzing data, elaborating case studies, developing assessments, learning how students learn QL, documenting what works and what doesn't work, developing educational materials, telling our story, and forging into new curricular arenas. It is as though we are telling our thought leader: "We're getting on with it, Lynn; we're going to establish your vision."

Appendix A: Citation List Section (The Cited Papers)

Bass, Hyman. 2003. What have we learned ... And what have we yet to learn? *In* Madison and Steen 2003: 247–249.

Madison and Steen 2009 <http://dx.doi.org/10.5038/1936-4660.2.1.2>

Best, Joel. 2008. Beyond calculation: Quantitative literacy and critical thinking about public issues. *In* Madison and Steen 2008: 125–135.

Vacher and Lardner 2010 <http://dx.doi.org/10.5038/1936-4660.3.2.6>

Madison 2012 <http://dx.doi.org/10.5038/1936-4660.5.1.6>

Brakke, David F. 2003. Addressing societal and workforce needs. *In* Madison and Steen 2003: 167–169.

Grawe and Rutz 2009 <http://dx.doi.org/10.5038/1936-4660.2.2.2>

Grawe et al. 2010 <http://dx.doi.org/10.5038/1936-4660.3.1.3>

Burkhardt, Hugh. 2008. Quantitative literacy for all: How can we make it happen? *In* Madison and Steen 2008: 137–162.

Madison 2012 <http://dx.doi.org/10.5038/1936-4660.5.1.6>

Tunstall and Bossé 2015 <http://dx.doi.org/10.5038/1936-4660.8.2.10>

Carnevale, Anothy P. and Donna M. Desrochers. 2003. The democratization of mathematics. *In* Madison and Steen 2003: 21–30.

Todd and Wagaman 2015 <http://dx.doi.org/10.5038/1936-4660.8.2.9>

Cobb, George W. 1992. Teaching statistics. *In* Steen 1992: 3–43.

Hassad 2011 <http://dx.doi.org/10.5038/1936-4660.4.2.7>

¹³ 74.5% of the citations were to the top 18 most-cited works, and 73.1% of the papers that were cited at least once were cited no more than 3 times.

- Cobb, George W. 1997. Mere literacy is not enough. *In Steen 1997*: 75–90.
Kosko and Wilkins 2011 (<http://dx.doi.org/10.5038/1936-4660.4.2.3>)
Russo 2015 (<http://dx.doi.org/10.5038/1936-4660.8.1.8>)
- Cohen, Patricia Cline. 2001. The emergence of numeracy. *In Steen 2001*: 23–29.
Vacher and Lardner 2011 (<http://dx.doi.org/10.5038/1936-4660.4.1.5>)
- Cohen, Patricia Cline. 2003. Democracy and the numerate citizen: Quantitative literacy in historical perspective. *In Madison and Steen 2003*: 7–20.
Todd and Wagaman 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.9>)
- Colwell, Rita. 2003. Quantitative literacy goals: Are we making progress? *In Madison and Steen 2003*: 243–246.
Tunstall and Bossé 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.10>)
- Cuban, Larry. 2001. Encouraging progressive pedagogy. *In Steen 2001*: 87–91.
Todd and Wagaman 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.9>)
- De Lange, Jan. 2003. Mathematics for literacy. *In Madison and Steen 2003*: 75–89.
Grawe et al. 2010 (<http://dx.doi.org/10.5038/1936-4660.3.1.3>)
Kosko and Wilkins 2011 (<http://dx.doi.org/10.5038/1936-4660.4.2.3>)
Smit and Mji 2012 (<http://dx.doi.org/10.5038/1936-4660.5.2.4>)
Todd and Wagaman 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.9>)
- Dossey, John A. 1997. National indicators of quantitative literacy. *In Steen 1997*: 45–59.
Kosko and Wilkins 2011 (<http://dx.doi.org/10.5038/1936-4660.4.2.3>)
- Dossey, John A. 1997. Defining and measuring quantitative literacy. *In Steen 1997*: 173–186.
Kosko and Wikins 2011 (<http://dx.doi.org/10.5038/1936-4660.4.2.3>)
Madison 2015 (<http://dx.doi.org/10.5038/1936-4660.8.1.11>)
- Ellis Jr., Wade. 2001. Numerical common sense for all. *In Steen 2001*: 61–65.
Russo 2015 (<http://dx.doi.org/10.5038/1936-4660.8.1.8>)
- Forman, Susan L. and Lynn Arthur Steen. 1999. *Beyond eighth grade: Functional mathematics for life and work*. Berkeley CA: National Center for Research in Vocational Education, 1999. (Also in *Learning mathematics for a new century*, ed. Maurice Burke, 127–157. Reston VA: National Council of Teachers of Mathematics, 2000).
Madison and Steen 2008 (<http://dx.doi.org/10.5038/1936-4660.1.1.2>)
Madison 2015 (<http://dx.doi.org/10.5038/1936-4660.8.1.11>)

Gal, Iddo. 1997. Numeracy: Imperatives of a forgotten goal. *In Steen 1997*: 36–43.

Wenner et al. 2009 (<http://dx.doi.org/10.5038/1936-4660.2.1.4>)
 Wetzel 2011 (<http://dx.doi.org/10.5038/1936-4660.4.1.4>)
 Madison 2015 (<http://dx.doi.org/10.5038/1936-4660.8.1.11>)

Gold, Bonnie. 2006. Assessment of developmental, quantitative literacy, and precalculus programs. *In Steen 2006*: 29–35.

Mayfield and Dunham 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.8>)

Hoachlander, Gary. 1997. Organizing mathematics education around work. *In Steen 1997*: 122–136.

Russo 2015 (<http://dx.doi.org/10.5038/1936-4660.8.1.8>)

Hughes-Hallett, Deborah. 2001. Achieving numeracy: The challenge of implementation. *In Steen 2001*: 93–98.

Steele and Kiliç-Bahi 2008 (<http://dx.doi.org/10.5038/1936-4660.1.2.3>)
 Steele and Kiliç-Bahi 2010 (<http://dx.doi.org/10.5038/1936-4660.3.2.3>)
 Wetzel 2011 (<http://dx.doi.org/10.5038/1936-4660.4.1.4>)
 Maclellan 2012 (<http://dx.doi.org/10.5038/1936-4660.5.2.3>)
 Russo 2015 (<http://dx.doi.org/10.5038/1936-4660.8.1.8>)

Hughes-Hallett, Deborah. 2003. The role of mathematics courses in the development of quantitative literacy. *In Madison and Steen 2003*: 91–98.

Steele and Kiliç-Bahi 2008 (<http://dx.doi.org/10.5038/1936-4660.1.2.3>)
 Grawe and Rutz 2009 (<http://dx.doi.org/10.5038/1936-4660.2.2.2>)
 Sikorskii et al. 2011 (<http://dx.doi.org/10.5038/1936-4660.4.2.5>)
 Sundre et al. 2012 (<http://dx.doi.org/10.5038/1936-4660.5.1.4>)
 Tunstall and Bossé 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.10>)

Kennedy, Dan. 2001. The Emperor’s vanishing clothes. *In Steen 2001*: 55–59.

Hillyard 2012 (<http://dx.doi.org/10.5038/1936-4660.5.2.2>)

Kolata, Gina. 1997. Understanding the news. *In Steen 1997*: 23–29.

Mayes et al., 2013 (<http://dx.doi.org/10.5038/1936-4660.6.1.4>)

Lutsky, Neil. 2008. Arguing with numbers: Teaching quantitative reasoning through argument and writing. *In Madison and Steen 2008*: 59–74.

Vacher and Chavez 2008 (<http://dx.doi.org/10.5038/1936-4660.1.2.2>)
 Madison and Steen 2009 (<http://dx.doi.org/10.5038/1936-4660.2.1.2>)
 Lutsky 2009 (<http://dx.doi.org/10.5038/1936-4660.2.1.6>)
 Grawe et al. 2010 (<http://dx.doi.org/10.5038/1936-4660.3.1.3>)
 Madison 2012 (<http://dx.doi.org/10.5038/1936-4660.5.1.6>)
 Hillyard 2012 (<http://dx.doi.org/10.5038/1936-4660.5.2.2>)
 Polito 2014 (<http://dx.doi.org/10.5038/1936-4660.7.1.6>)
 Follette et al. 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.2>)
 Tunstall and Bossé 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.10>)

Madison, Bernard L. 2003. Articulation and quantitative literacy: A view from inside mathematics. *In* Madison and Steen 2003: 153–164.

- Rheinlander et al. 2008 (<http://dx.doi.org/10.5038/1936-4660.1.1.4>)
- Mayes et al., 2013 (<http://dx.doi.org/10.5038/1936-4660.6.1.4>)
- Madison 2014 (<http://dx.doi.org/10.5038/1936-4660.7.2.3>)
- Tunstall and Bossé 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.10>)

Madison, Bernard L. and Lynn Arthur Steen. 2003. *Quantitative literacy: Why numeracy matters for schools and colleges*. Princeton, NJ: The National Council on Education and the Disciplines.¹⁴

- Madison and Steen 2008 (<http://dx.doi.org/10.5038/1936-4660.1.1.2>)
- Rheinlander et al. 2008 (<http://dx.doi.org/10.5038/1936-4660.1.1.4>)
- Vacher and Chavez 2008 (<http://dx.doi.org/10.5038/1936-4660.1.2.2>)
- Steele and Kiliç-Bahi 2008 (<http://dx.doi.org/10.5038/1936-4660.1.2.3>)
- Madison and Steen 2009 (<http://dx.doi.org/10.5038/1936-4660.2.1.2>)
- Wenner et al. 2009 (<http://dx.doi.org/10.5038/1936-4660.2.1.4>)
- Grawe and Rutz 2009 (<http://dx.doi.org/10.5038/1936-4660.2.2.2>)
- Mast 2009 (<http://dx.doi.org/10.5038/1936-4660.2.2.6>)
- Grawe et al. 2010 (<http://dx.doi.org/10.5038/1936-4660.3.1.3>)
- Sorey et al. 2010 (<http://dx.doi.org/10.5038/1936-4660.3.1.6>)
- Dingman and Madison 2010 (<http://dx.doi.org/10.5038/1936-4660.3.2.4>)
- Wetzel 2011 (<http://dx.doi.org/10.5038/1936-4660.4.1.4>)
- Kosko and Wilkins 2011 (<http://dx.doi.org/10.5038/1936-4660.4.2.3>)
- Sikorskii et al. 2011 (<http://dx.doi.org/10.5038/1936-4660.4.2.5>)
- Boersma et al. 2011 (<http://dx.doi.org/10.5038/1936-4660.4.2.8>)
- Sundre et al. 2012 (<http://dx.doi.org/10.5038/1936-4660.5.1.4>)
- Hillyard 2012 (<http://dx.doi.org/10.5038/1936-4660.5.2.2>)
- Smit and Mji 2012 (<http://dx.doi.org/10.5038/1936-4660.5.2.4>)
- Mayes et al., 2013 (<http://dx.doi.org/10.5038/1936-4660.6.1.4>)
- Boersma and Klyve 2013 (<http://dx.doi.org/10.5038/1936-4660.6.1.6>)
- Rocconi et al. 2013 (<http://dx.doi.org/10.5038/1936-4660.6.2.10>)
- Madison 2014 (<http://dx.doi.org/10.5038/1936-4660.7.2.3>)
- Mayes et al., 2014 (<http://dx.doi.org/10.5038/1936-4660.7.2.5>)
- Russo 2015 (<http://dx.doi.org/10.5038/1936-4660.8.1.8>)
- Mayes et al. 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.4>)
- Todd and Wagaman 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.9>)
- Tunstall and Bossé 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.10>)
- Tunstall 2015 (<http://dx.doi.org/10.5038/1936-4660.8.2.12>)

Madison, Bernard L., and Lynn Arthur Steen. 2008. Evolution of numeracy and the National Numeracy Network. *Numeracy* 1(1), article 2.

- Vacher and Chavez 2008 (<http://dx.doi.org/10.5038/1936-4660.1.2.2>)
- Boersma and Willard 2008 (<http://dx.doi.org/10.5038/1936-4660.1.2.5>)
- Karaali 2008 (<http://dx.doi.org/10.5038/1936-4660.1.2.6>)
- Taylor 2009 (<http://dx.doi.org/10.5038/1936-4660.2.2.1>)

¹⁴ Available at: http://www.maa.org/external_archive/QL/qltoc.html (accessed Dec 21, 2015)

Sorey et al. 2010	http://dx.doi.org/10.5038/1936-4660.3.1.6
Catalano 2010	http://dx.doi.org/10.5038/1936-4660.3.1.7
Dingman and Madison 2010	http://dx.doi.org/10.5038/1936-4660.3.2.4
Vacher and Lardner 2010	http://dx.doi.org/10.5038/1936-4660.3.2.6
Kosko and Wilkins 2011	http://dx.doi.org/10.5038/1936-4660.4.2.3
Ward et al. 2011	http://dx.doi.org/10.5038/1936-4660.4.2.4
Boersma et al. 2011	http://dx.doi.org/10.5038/1936-4660.4.2.8
Madison 2012	http://dx.doi.org/10.5038/1936-4660.5.1.6
Hillyard 2012	http://dx.doi.org/10.5038/1936-4660.5.2.2
Harrison 2014	http://dx.doi.org/10.5038/1936-4660.7.2.2
Madison 2014	http://dx.doi.org/10.5038/1936-4660.7.2.3
Russo 2015	http://dx.doi.org/10.5038/1936-4660.8.1.8
Madison 2015	http://dx.doi.org/10.5038/1936-4660.8.1.11
Tunstall and Bossé 2015	http://dx.doi.org/10.5038/1936-4660.8.2.10

Madison, Bernard L., and Lynn Arthur Steen, eds. 2008. *Calculation vs. context: Quantitative literacy and its implications for teacher education*. Washington DC: Mathematical Association of America.¹⁵

Vacher and Chavez 2008	http://dx.doi.org/10.5038/1936-4660.1.2.2
Madison and Steen 2009	http://dx.doi.org/10.5038/1936-4660.2.1.2
Vacher and Chavez 2009	http://dx.doi.org/10.5038/1936-4660.2.1.5
Lutsky 2009	http://dx.doi.org/10.5038/1936-4660.2.1.6
Grawe et al. 2010	http://dx.doi.org/10.5038/1936-4660.3.1.3
Sorey et al. 2010	http://dx.doi.org/10.5038/1936-4660.3.1.6
Dingman and Madison 2010	http://dx.doi.org/10.5038/1936-4660.3.2.4
Vacher and Lardner 2010	http://dx.doi.org/10.5038/1936-4660.3.2.6
Gaze 2010	http://dx.doi.org/10.5038/1936-4660.3.2.8
Steen and Madison 2011	http://dx.doi.org/10.5038/1936-4660.4.1.1
Watson 2011	http://dx.doi.org/10.5038/1936-4660.4.1.2
Boersma et al. 2011	http://dx.doi.org/10.5038/1936-4660.4.2.8
Madison 2012	http://dx.doi.org/10.5038/1936-4660.5.1.6
Hillyard 2012	http://dx.doi.org/10.5038/1936-4660.5.2.2
MacLellan 2012	http://dx.doi.org/10.5038/1936-4660.5.2.3
Rocconi et al. 2013	http://dx.doi.org/10.5038/1936-4660.6.2.10
Scharnagl et al. 2014	http://dx.doi.org/10.5038/1936-4660.7.1.4
Polito 2014	http://dx.doi.org/10.5038/1936-4660.7.1.6
Madison 2014	http://dx.doi.org/10.5038/1936-4660.7.2.3
Mayes et al. 2014	http://dx.doi.org/10.5038/1936-4660.7.2.5
Dumford and Rocconi 2015	http://dx.doi.org/10.5038/1936-4660.8.1.5
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Appendix B: Source List Section (The Citing Papers)

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