

STRENGTHS

1. NNN has strong academic foundations.
 - *Why Numbers Count: Q/L for Tomorrow's America* (1997) Edited by Lynn Steen
 - *Mathematics and Democracy: The Case for Quantitative Literacy* (2001) Edited by Lynn Steen
 - *Quantitative Literacy: Why Numeracy Matters* (2003). Edited by Bernie Madison & Lynn Steen
 - *Achieving Quantitative Literacy: An Urgent Challenge for Higher Ed* (2004). Ed by Lynn Steen
 - *Calculation vs. Context: Quantitative Literacy* (2008). Edited by Bernie Madison & Lynn Steen
2. NNN has strong organizational leadership. Bernie Madison, the NNN's founding president, has provided his reputation, guidance and inspiration as have the next three presidents: Corrine Taylor, Caren Diefenderfer and Eric Gaze. NNN has a strong and diversified core of faculty (most of whom are located in math departments) that are personally committed to the success of NNN.
3. NNN has the premier Q/L journal, *Numeracy*, edited by Len Vacher and Nathan Grawe. The journal and the website are open-access to readers and free-of-page charges to contributors.
4. NNN members have developed several introductory textbooks that emphasize quantitative literacy:
 - *Thinking Quantitatively Communicating with Numbers* (2014) by Eric Gaze
 - *Quantitative Literacy Thinking Between the Lines* (2011) by Crauder, et. al.,
 - *Case Studies for Quantitative Reasoning* (2nd ed, 2010) by Madison et al.
 - *Quantitative Reasoning: Tools for Today's Informed Citizen* (2007) by Sevilla and Somers
5. NNN is first when googling 'numeracy network'.
6. NNN has over \$25,000 in the bank and a good web-based membership program (Wild Apricot).
7. In 20167, NNN reduced its web costs from \$6K/year to \$750/year. NNN's 2018 budget allows it to support *Numeracy* with \$3,000 per year and to compensate officers \$500 each for travel.
8. NNN has excellent institutional supporters: the AAC&U (Amer. Assoc. Colleges & Univ.), PKAL (Project Kaleidoscope) and the MAA (Mathematics Association of America).
9. NNN is unique in being interdisciplinary: totally separate from math/stat organizations.
10. NNN has a new website as of July 2017. The old SERC website had almost 13,000 visits (25,000 page views) between Nov 2014 and Oct 2015. With 1,200 visits (3,600 page view) in the first three months, NNN's new website is on target for 4,800 visits (14,400 page views) in the first year.
11. Based on a 2009 MAA study, a sizable fraction of colleges are offering courses involving QR, QL or statistical literacy. Copy at www.statlit.org/pdf/2010SchieldJMM6up.pdf
12. NNN president, Eric Gaze, has developed a Quantitative Literacy-Reasoning Assessment (QLRA).

WEAKNESSES:

1. NNN is almost invisible. When Googling 'numeracy', NNN does not appear in the first 100 items [the journal ranks 15th]. NNN ranks 19th when searching for 'National Numeracy'.
2. The NNN website has comparatively little traffic. NNN SERC had 13,000 visits and 24,000 page views in 2015. These are small compared to the 260,000 visits in 2014 at www.StatLit.org.
3. The new NNN website has little content that would drive web traffic. Less than 30 articles; one video.
4. NNN failed to have annual conferences in 2015 and 2016 since NNN didn't have the budget so college sponsorship has been required to cover most of the cost.
5. NNN lacks a mission or vision that clearly distinguishes it from the MAA's QL-SIG.
6. NNN hasn't had measurable goals that might encourage educators to become members.
7. NNN has no financial home or sponsor. NNN must support itself or go out of business.
8. NNN doesn't have institutional support from the American Statistical Association or the American Sociological Association..
9. NNN has a small membership (less than 100) and a low member income (< \$2,000/yr).
10. NNN members cannot expect to get "something" for their membership since NNN is open-access.
11. *Numeracy* is inadequately funded. It is free to contributors, but the copy-editing cost is easily \$5K to \$10K per year. So the editors currently donate their time for this important activity.
12. Most NNN members are math based. (*Numeracy* has a much wider range of author departmental affiliations than that of the NNN).
13. NNN has been unable to attract many members from statistical education – even though *Numeracy* has featured several articles by statistical educators.
14. The NNN has been unable to attract or retain members from those in the professions (Business), in the social sciences (Economics, Sociology, Social Work) or in Psychology. .
15. NNN has historically set high goals, but repeatedly come up short. The leaders envision an organization with several hundred individual members and end up with less than 100.
16. NNN has problems finding members who are willing to be officers.

THREATS:

1. NNN is almost totally reliant on the efforts of an extremely small group of people (less than half a dozen). Without their continuing effort, NNN might easily cease to exist.
2. NNN doesn't offer any way to measure or assess quantitative literacy.
3. NNN has competition: The MAA QL-SIG is available to mathematical educators – which includes most of NNN's members.
4. NNN seems unable to generate publicity about its activities.
5. *Numeracy* may be unable to find dedicated editors and reviewers within NNN's small membership.

OPPORTUNITIES:

1. NNN could form a board of highly-visible Q/L supporters who lend their names in support of NNN.
2. NNN could increase traffic on the NNN website by adding content: By (1) featuring trade books involving QL, and by (2) hosting webinars featuring QL authors or educators.
3. NNN has the income to sponsor conferences annually by itself. These could be nation-wide.
4. NNN could partner with the MAA QL-SIG to repeat the 2009 survey on the quantitative graduation requirements at US Colleges. Copy at www.statlit.org/pdf/2010SchieldJMM.pdf
5. NNN could uphold standards and goals. E.g., At least 50% of US Colleges and Universities should have a catalog course in Quantitative or Statistical Literacy. At least half of these colleges should offer such a course (or courses) every year. NNN could endorse various QL assessments.
6. NNN could do more to feature its connection with *Numeracy*: a journal that is known and respected
7. The NNN Board has an opportunity to adjust the direction of NNN by:
 - a. Supporting a quantitative literacy in which arguments involving numbers are central but where the conclusion may be a non-numeric claims (See Lynn Steen's *Mathematics and Democracy*).
 - b. Supporting the AAC&U's Quantitative Reasoning rubric (2009) including the "ability to make and evaluate important assumptions in estimation, modeling, and data analysis." This focus on assumptions in data analysis can include the formation of categories, measures and summary statistics.
 - c. Supporting statistics as being socially-constructed (see Joel Best's *Lies, Damned Lies & Statistics*),
 - d. Supporting either quantitative literacy or statistical literacy as an alternative to Algebra II for students who aren't planning on quantitative majors in college. [See Maura Mast's *Numeracy* review at www.statlit.org/pdf/2009MastReviewOfSchield-QLvsSchoolMathematics-Numeracy.pdf