

STRENGTHS

1. Quantitative Literacy has a strong academic foundation.
 - Quantitative Reasoning for College Graduates: A Complement to the Standards. CUPM, L. Sons
 - *Why Numbers Count: Quantitative Literacy 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 and Lynn Steen
 - *Achieving Quantitative Literacy: An Urgent Challenge for Higher Ed* (2004). Ed by Lynn Steen
 - *Current Practices in Quantitative Literacy* (2006) Editor, Richard Gillman
 - *Calculation vs. Context: Quantitative Literacy ...* (2008). Edited by Bernie Madison & Lynn Steen
2. 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 members have developed several introductory textbooks that emphasize quantitative literacy:
 - *Quantitative Reasoning: Tools for Today's Informed Citizen* (2007) by Sevilla and Somers
 - *Statistical Literacy: Seeing the Story behind the Story* (2003) by Milo Schield
 - *Case Studies for Quantitative Reasoning* (2nd ed, 2010) by Madison et al.
 - *Quantitative Literacy Thinking Between the Lines* (2011) by Crauder, et. al.,
 - *Thinking Quantitatively Communicating with Numbers* (2014) by Eric Gaze
4. NNN has a highly respected journal, *Numeracy*, edited by Len Vacher and Dorothy Wallace that is written by – and reaches to – educators in a wide-variety of disciplines. The journal and the website are open-access to all and free-of-page charges to contributors, so its message is widely distributed and the research it promotes is widely read. Readership is increasing, as is its international reach.
5. When one Google's "numeracy", Numeracy in Wikipedia is first, NationalNumeracy.org.uk is 2nd and 3rd. skillsyouneed.com/numeracy-skills is 4th and the NNN journal *Numeracy* is 5th.
6. NNN has over \$15,000 in the bank and a good web-based membership program (Wild Apricot).
7. NNN is affiliated with the AAC&U (Amer. Assoc. Colleges & Univ.) and PKAL (Project Kaleidoscope). NNN is unique in supporting QR/QL while being totally separate from mathematics organizations.
8. NNN has a good website maintained by SERC: the Science Education Research Center at Carleton. In the last 12 months (11/2014-10/2015), the website had 12,581 visitors and 24,397 page views. Of these visits, 19% involved returning visitors; in 23.9% of the visits more than one page was accessed.
9. 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
10. NNN president, Eric Gaze, has developed a Quantitative Literacy-Reasoning Assessment (QLRA).

WEAKNESSES:

1. NNN has no financial home. NNN must support itself or go out of business.
2. NNN is paying \$5,000 per year to SERC@Carleton for the NNN website.
3. NNN has always had low membership numbers (less than 100) and low annual income (< \$2,000).
4. NNN features open access, so members cannot expect to get "something" for their membership.
5. NNN has no money to compensate the editors, reviewers and administrators of *Numeracy*.
6. NNN has little money to cover expenses of officers to attend NNN conferences.
7. NNN lacks a mission or vision that clearly distinguishes it from the MAA's QL-SIG.
8. Numeracy has a much wider range of authors and readers than that of the NNN members – most of whom are in mathematics. NNN has not yet connected with the community that *Numeracy* reaches.
9. NNN has specifically been unable to attract many members from statistical education – even though *Numeracy* has featured several articles by statistical educators.
10. 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. .
11. The NNN website has comparatively little traffic. NNN's 13,000 visits and 24, 000 page views in the last 12 months are small compared to the 260,000 visits and page views in 2014 at www.StatLit.org.
12. NNN is having difficulty finding candidates for officer positions.
13. When Googling "numeracy", the "National Numeracy Network – SERC" ranks 15th. Most of the organizations with higher ranks are in the UK or in "Commonwealth" countries.
14. There may be some internal disagreement on the choice of the name for the organization.
15. NNN seems to 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 a problem finding members who are willing to be officers.
17. NNN doesn't have measurable goals that might encourage educators to become members.
18. NNN has no vision for how it could function effectively with less than 100 members.
19. NNN has never conducted a fund raiser for a specific goal.

THREATS:

1. NNN will be broke and loose its website in three years if it can't increase revenue or cut web expense.
2. Without grants, NNN members can't support NNN conferences/workshops at their colleges.
3. NNN has competition: The MAA QL-SIG is available to mathematical educators – which includes most of NNN's members.
4. NNN is unable to field annual conferences by itself so it doesn't get much publicity.
5. *Numeracy* may be unable to find dedicated editors and reviewers within NNN's small membership.

OPPORTUNITIES:

1. NNN has adequate financing for short-term survival. It can use that time to plot a new course.
2. NNN may be able to obtain a cheaper website than the \$5,000/year website through SERC. NNN VP (Schield) & NNN Sec-Treasurer (Isaacson) are investigating cheaper alternatives.
3. NNN could increase traffic on the NNN website by (1) highlighting and supporting textbooks that promote numeracy, quantitative reasoning, quantitative literacy and statistical literacy, and (2) by hosting webinars featuring textbook authors who show how to teach from their textbook.
4. NNN could do more to feature its connection with *Numeracy*: a journal that is known and respected
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 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
7. The NNN Board has an opportunity to adjust the direction of NNN by supporting:
 - a. 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. 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. the social construction of statistics (see Joel Best's *Lies, Damned Lies & Statistics*),
 - d. 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