

2026- AAC&U Class Conference.
Schield Proposal

Title: Quo Vadis? How Statistics Failed Democracy and How That Can be Remedied

How did we get here? Heated arguments filled with social statistics. Numerical disparities look like solid facts that call for immediate action. Systemic discrimination that can only be seen when summarized by statistics. College students graduate without learning what it means to take something into account quantitatively. Yet what is – or is not – taken into account is critical in most arguments.

Suppose that women earn 76 cents for every dollar a man makes. Can that disparity be reduced if we take into account work status: full-time vs. part time; permanent vs. temporary? Today's students want to deal with these controversial issues, but they lack the tools to have intelligent arguments.

This session addresses the need for a statistical literacy course that meets the needs of the 35% of college students in non-quantitative majors: majors that don't require a particular math-stat course. It should be accessible (no computers and no algebra) and be valued by students.

This course exists: Statistical Literacy studies how statistics are constructed and manipulated. This course was presented in the innovation track at the 2024 AAC&U meeting on General Education.

This paper argues that it will take pressure by deans, chairs and faculty in the humanities for statistical educators to offer this course. This paper presents a set of desired student outcomes for such a course along with evidence such a course exists.

List 3-5 takeaways you hope the audience will learn from your talk. (190/200 words)

1. Participants will recognize that today's students need a different statistics course. A modern democracy needs students trained to read and interpret everyday statistics as presented in tables, graphs and ordinary English: students able to ask intelligent questions. Students in non-quantitative majors need a statistics course focused on causal inference: using statistics as evidence in arguments about causal connections.
2. Participants will see that such a course exists. It has a published textbook, is accessible (no algebra and no computers), is offered at multiple colleges, satisfies a state-wide general education requirement, and is required by statistics majors at one university and by all first-year students at another college.
3. Participants will see why students see value in such a course. Why most students agreed it should be required for all college students. Why most said it did more to help their critical thinking than any other course they had taken.

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4. Participants will understand why statistical educators are unlikely to offer this course without external pressure.
5. Deans, chairs and faculty will now have a basis for requesting that statistical educators offer a course designed for students in non-quantitative majors.

Background and Evidence (236/250 words)

* This statistical literacy course is based on a \$500K grant from the W. M. Keck Foundation to "develop statistical literacy as an interdisciplinary curriculum in the liberal arts." The course is based on a textbook (Statistical Literacy: Critical Thinking about Everyday Statistics) published by Kendall Hunt. The course has been adopted by a major research university (U of New Mexico, ABQ) and a small liberal arts college (New College of Florida). At New Mexico, it is required for those majoring in statistics. At New College, it is required for all incoming students. Students value this course. At least half of those taking this course in 2024-25 in New Mexico and Florida agreed -- or strongly agreed -- that it should be required for all students.

* The PI on the Keck grant, the author of the textbook, and the developer of the course is Dr. Milo Schield. He is a Fellow with the American Statistical Association: an honor limited to 0.5% of the membership. He is an elected member of the International Statistical Institute and the US representative of the International Statistical Literacy Project. He is the author 100+ papers on statistical literacy that have received 1,000+ citations. He has given 38 talks on statistical literacy outside the US in 18 countries. Schield was described as "the leader of the [statistical literacy] movement" by Dr. Joel Best in his book: "More Damned Lies and Statistics".

Plan for Participant Interaction (90/100 words)

Participants will discuss three questions:

1. Do students in non-quantitative majors need a quantitative rhetoric course involving everyday statistics that is different from existing mathematics and statistics courses?
2. How suitable is the typical introductory statistics course as a general education course? How broad (or narrow) is the audience for this course?
3. Could an argument-based statistical literacy course help today's students discuss controversial social and political topics more productively?