

Evidence-Based Educational Practices at the University of Virginia:
A Snapshot from the Inaugural Academic Symposium on Teaching and Learning

The Center for Advanced Study of Teaching and Learning in Higher Education
(CASTL-HE)



EXECUTIVE SUMMARY

The Inaugural Academic Symposium highlighted evidence-based pedagogy employed across the University of Virginia. Attendees were invited to complete a paper survey at the conclusion of each session or online immediately after the Symposium. Survey results indicated that faculty perspectives on evidence, sources of evidence, and use of evidence varied by discipline. Results also suggest that support for evidence-based classroom practice exists across a number of schools at the University of Virginia.

INTRODUCTION

The University of Virginia's Board of Visitors introduced Dr. Teresa Sullivan as their selection to become the university's eighth president on January 11, 2010. Near the close of her first full academic year on the job, President Sullivan was honored during a week of festivities in April 2011 designed to celebrate her formal installation. One such event, the Inaugural Academic Symposium, brought together scholars from across grounds to share the ways in which evidence is used to improve teaching and learning at the University of Virginia. The Symposium schedule included fifty presentations – 28 research presentations, 21 roundtable presentations, and 1 keynote presentation – given by faculty from eight of the university's eleven schools. This pan-university gathering provided a unique opportunity to learn about the types of evidence faculty use to inform their teaching practices. The purpose of this report is to provide a snapshot of the evidence-based educational practices of faculty at the University of Virginia.

METHODS

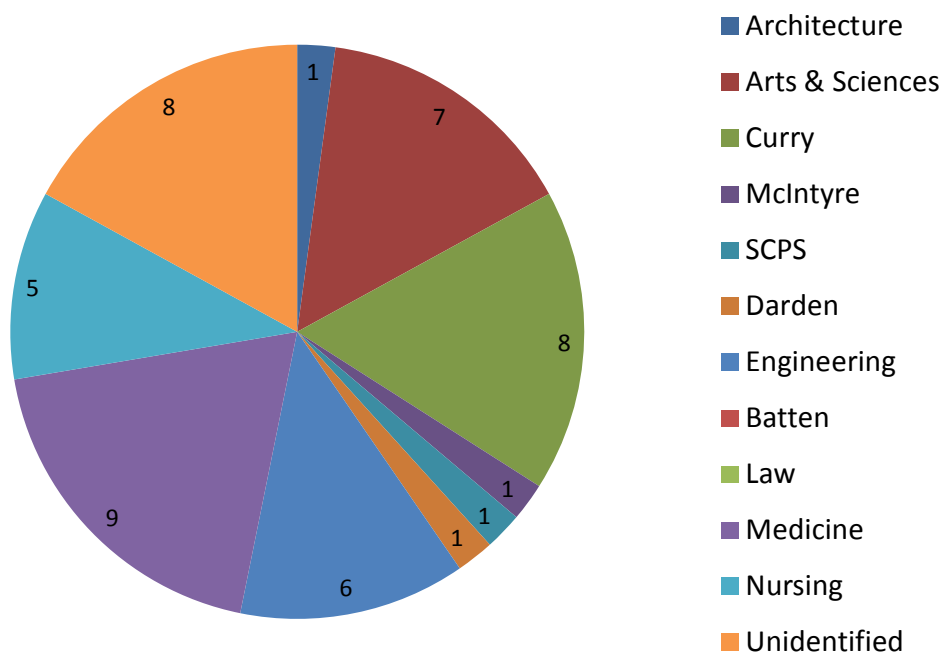
Data for this report were gathered during and immediately after the Inaugural Academic Symposium in April 2011. At the close of each session (keynote, research, roundtable), attendees were given a one-page, nine-item paper survey to voluntarily complete. An electronic version of the survey was also sent to 212 registrants one week after the symposium. Survey items followed ordinal, categorical, or open-ended question formats. In addition to basic demographic questions, survey items queried faculty regarding their attitudes about, sources of, and uses of evidence in their educational practice. Forty-six individuals completed and returned the survey out of approximately 250 total attendees for a response rate of ~20%.

FINDINGS

Sample Characteristics

Two open-ended survey items provided demographic data for the survey sample. Respondents were asked to name their school and position or rank. Results indicated that at least one individual from nine of the eleven schools at the University of Virginia completed the survey (see Figure 1, below). Five schools – the College of Arts and Sciences, the Curry School of Education, the School of Engineering and Applied Science, the School of Medicine, and the School of Nursing – were represented in the sample by at least five respondents. Subsequent analyses by school will be limited to these five schools, as the representation of the other schools in this particular sample was quite low ($n \leq 1$).

Figure 1
Total Respondents by School



Although teaching faculty represented the majority of the sample, a number of graduate students, research faculty, and staff or administrators completed the survey as well (see Figure 2, below).

Figure 2
Total Respondents by Position

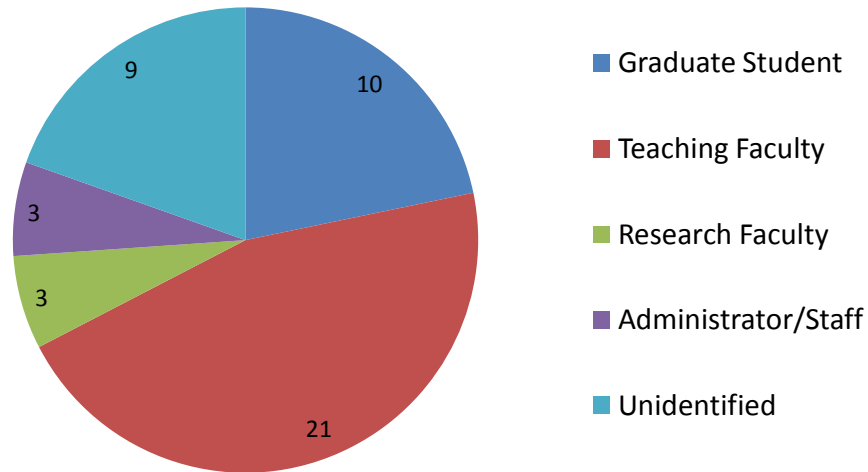
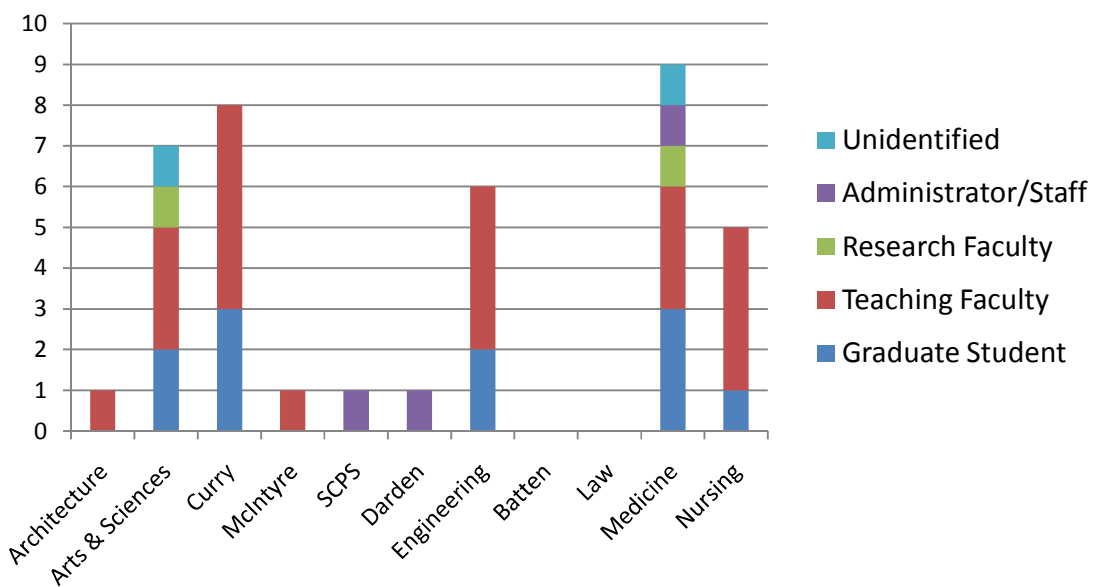


Figure 3 illustrates the diversity of the sample by school and position. Respondents from the School of Medicine and the College of Arts & Sciences were the most diverse by position.

Figure 3
Total Respondents by School and Position



Perspectives on Evidence

Two “check all that apply” questions offered respondents the opportunity to provide their perspectives on seven types of evidence: single case study, series of case studies, evidence reported in multiple journal articles, anecdote from a colleague, national dataset of survey data, national study using mixed methods, and preliminary evidence from a small study. One item asked respondents to identify the baseline level of evidence they would need to see before adopting a particular educational method in their own classroom practice, based upon the above list of possibilities. A second item asked respondents to identify the types of research that they found to be compelling evidence of educational efficacy. Figure 4 (below) compares the percentage of total respondents that deemed various types of research as necessary to justify changes to classroom practice with the percentage of total respondents that viewed the each type of research as merely persuasive. A majority of respondents found three types of research – series of case studies, national study using mixed methods, and results reported in multiple journal articles – to be both necessary and persuasive.

Figure 4
Respondent Perspectives on Educational Evidence

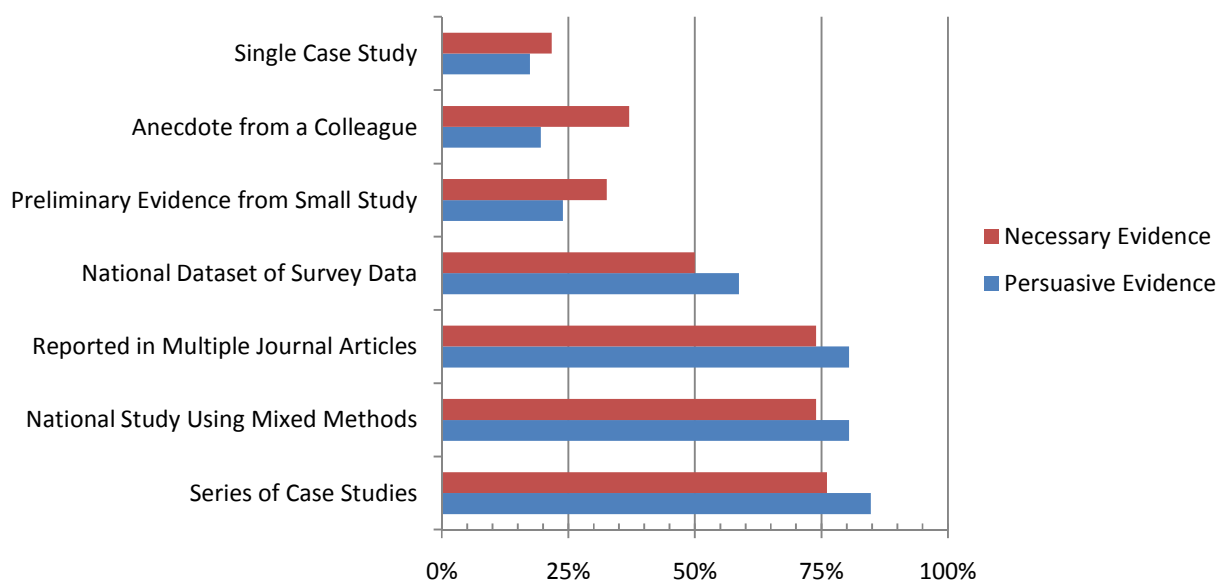


Figure 5 (below) illustrates the percentage of respondents from each school that found various types of research persuasive enough to spur changes to classroom practice. Though the percentages varied somewhat by school, the generally upward trajectory of each line demonstrates that respondents' views generally did not diverge significantly according to their academic discipline. Exceptions to this trend include decreases at five data points: Anecdote from a Colleague, Nursing; Preliminary Evidence – Small Study, Arts & Sciences and Medicine; National Study – Mixed Methods, Engineering; and Series of Case Studies, Medicine.

Figure 5
Persuasive Evidence by School

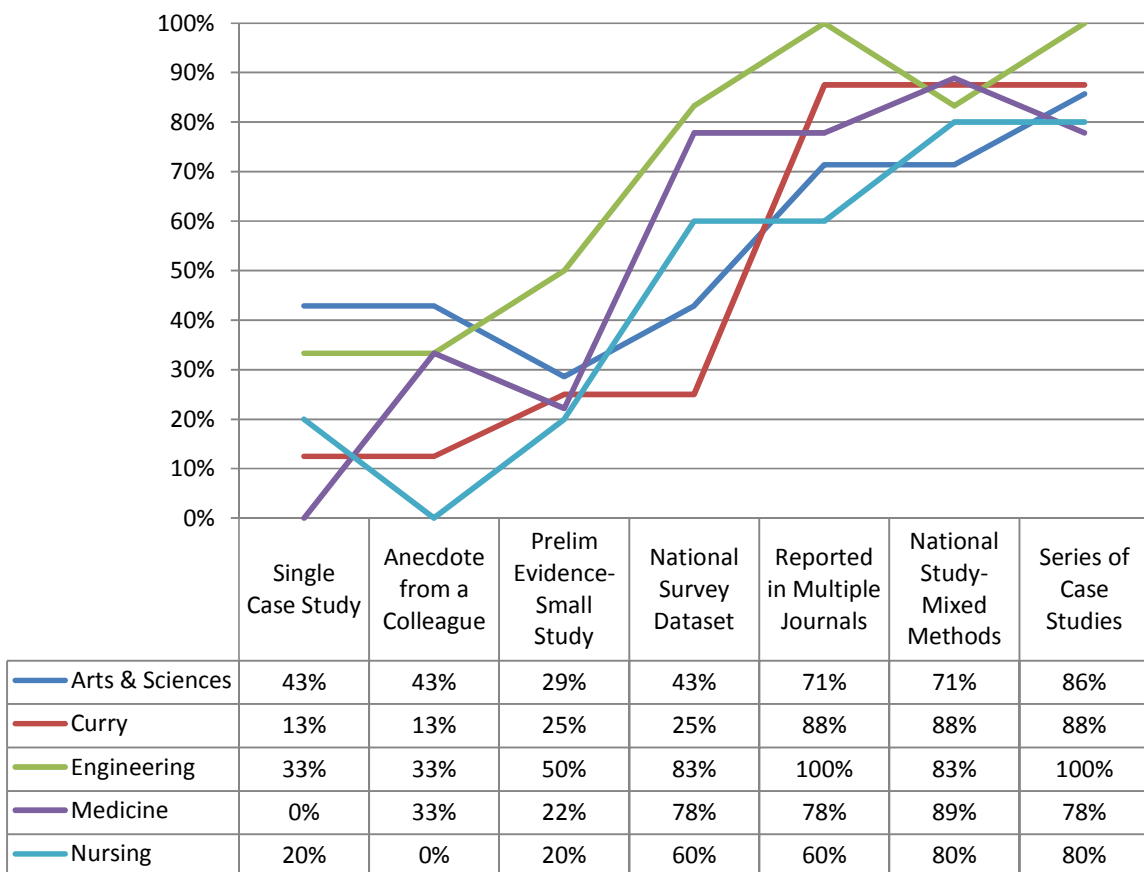
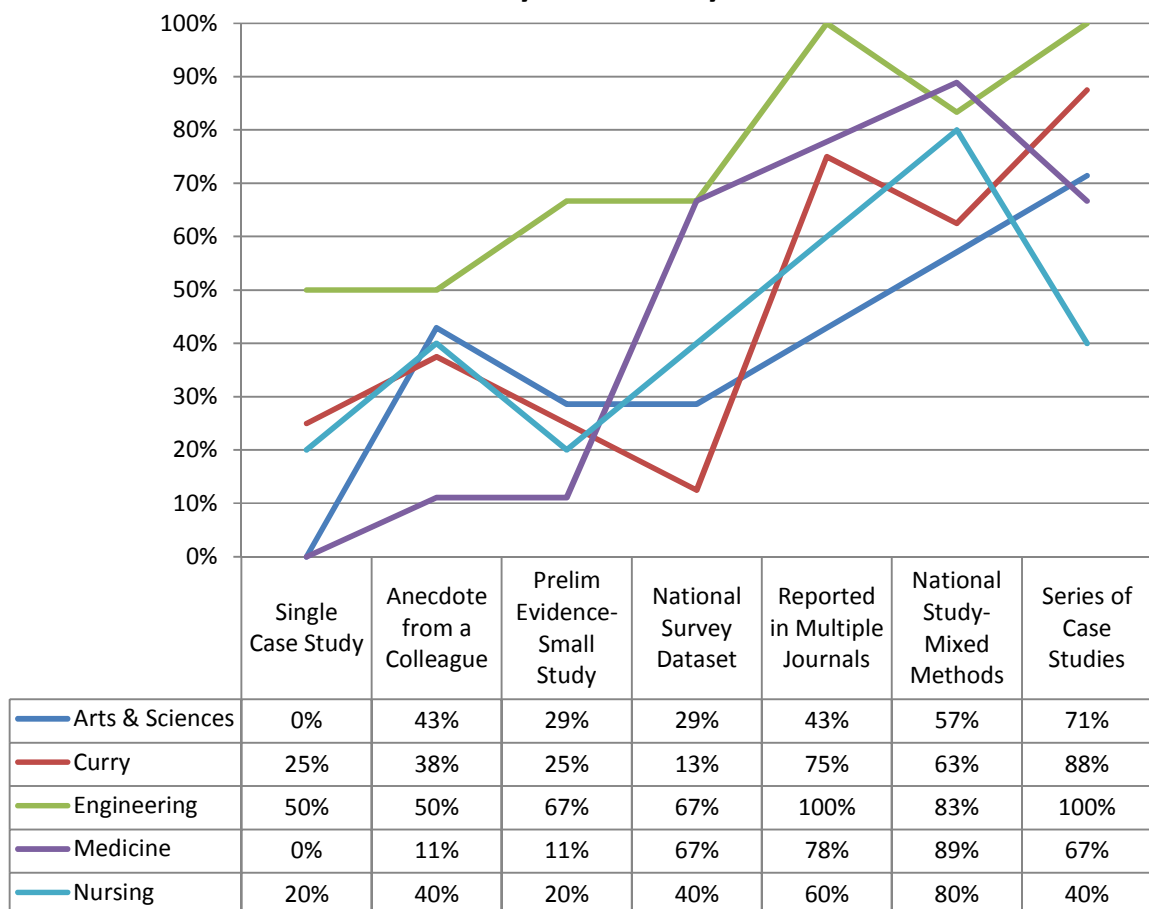


Figure 6 (below) presents the percentage of respondents from each school who viewed various types of research as necessary to justify changes in classroom practice. Unlike in Figure 5, each school line varies significantly, suggesting differing standards for evidence by school. Put another way, respondents from one academic discipline may be more willing to alter their classroom practice when presented with some form of evidence, while others may demand specific types of evidence before enacting pedagogical change. For example, at least half of the respondents from the School of Engineering and Applied Science viewed every one of the seven types of research as necessary, while only four types of research – series of case studies, research reported in multiple journals, a national dataset of survey data, and a national mixed methods study – received “necessary” billing from at least half of the respondents from the Medical School.

Figure 6
Necessary Evidence by School



Sources of Evidence

The overwhelming majority of respondents (89%) indicated that they reviewed educational (e.g., pedagogical) literature in their respective fields. In addition, one “check all that apply” question gave respondents the opportunity to identify the ways in which they reviewed the educational literature in their field: by reading journal articles, attending conferences, reading books, attending workshops, participating in mentoring, and consulting academic news sources (see Figure 7, below). Top sources of pedagogical evidence included journals (74%), conferences (67%), and workshops (54%). Respondents could also provide further sources of evidence they regularly reviewed via the option “other.” Additional sources provided by respondents included websites, listservs, and school symposia.

Figure 7
Evidence Sources Consulted by Respondents

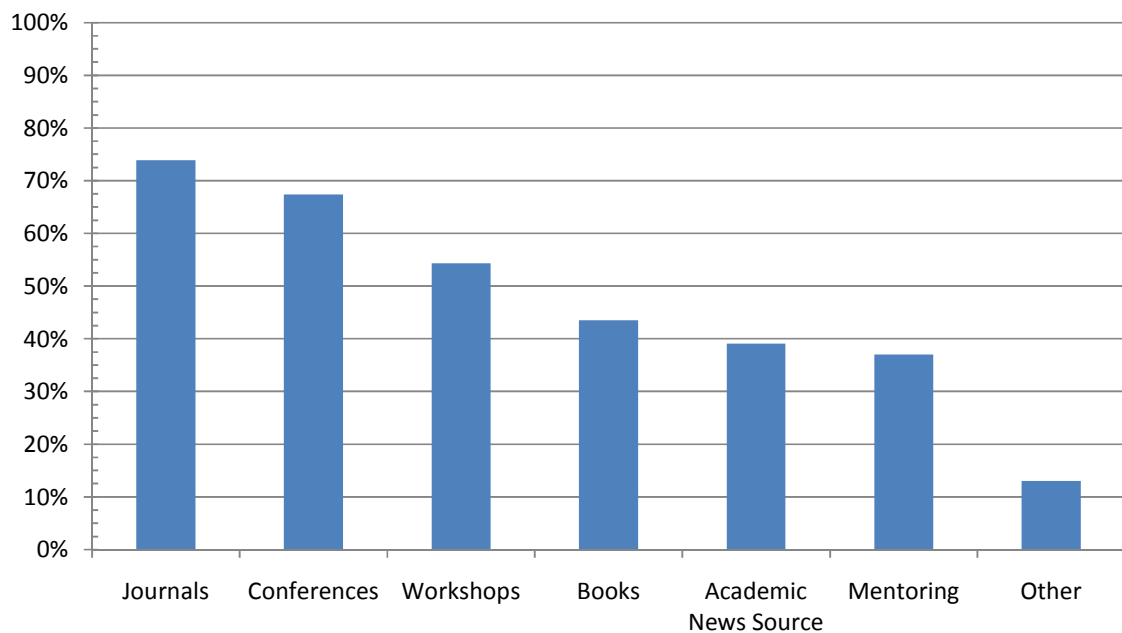


Figure 8 (next page) shows the percentage of respondents who consult various types of evidence by school. The divergent lines illustrate differences in evidence preferences by discipline. For example, 100% respondents from the Curry School of Education regularly

consult journals for pedagogical evidence, while the same can be said of only 57% of respondents from the College of Arts and Sciences. However, when it comes to workshops as sources of educational evidence, Curry rates the lowest at 25% of respondents, versus a high of 78% of respondents from the School of Medicine.

Preferred sources of educational evidence also differ by position. Figure 9 (next page) compares the preferences of teaching faculty respondents to graduate student respondents. Generally speaking, teaching faculty respondents consulted a wider array of educational evidence than their graduate student counterparts. The lone exception was for the option “mentoring,” which was selected by more graduate student respondents than teaching faculty respondents.

Figure 8
Evidence Sources Consulted by School

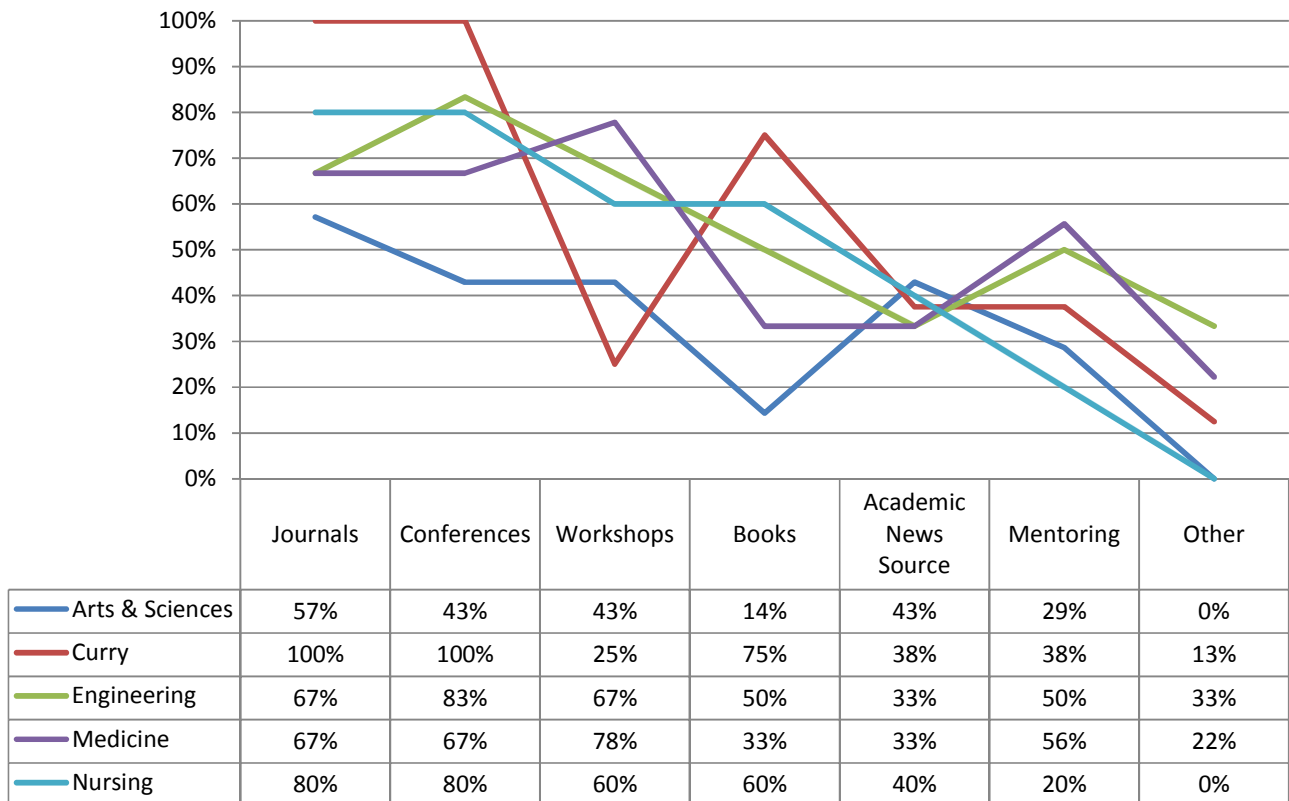
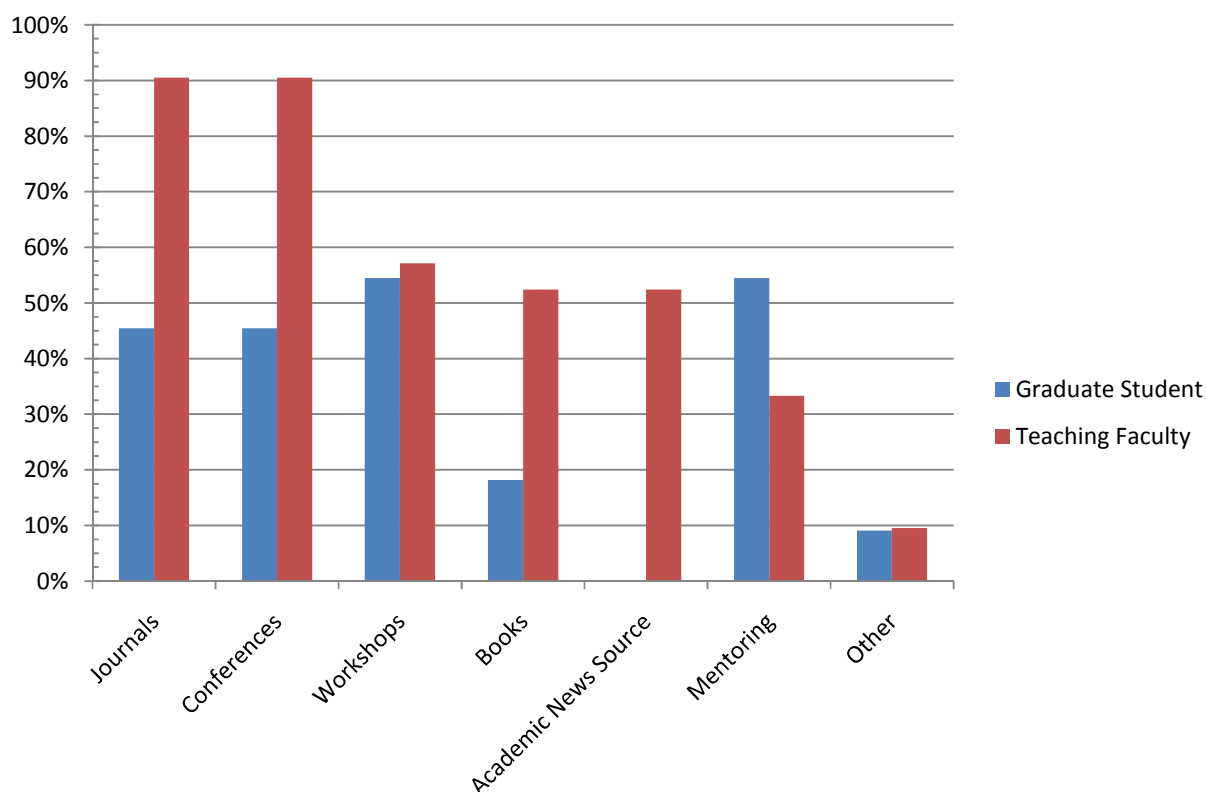


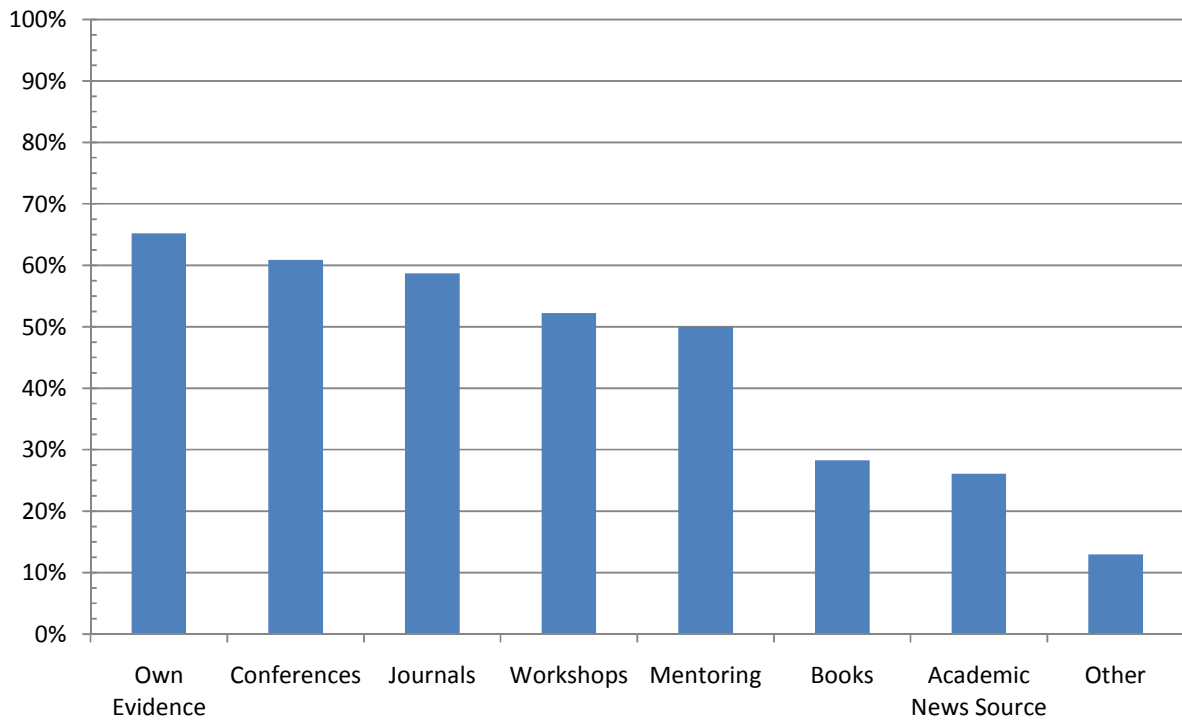
Figure 9
Evidence Sources Consulted by Position



Use of Evidence

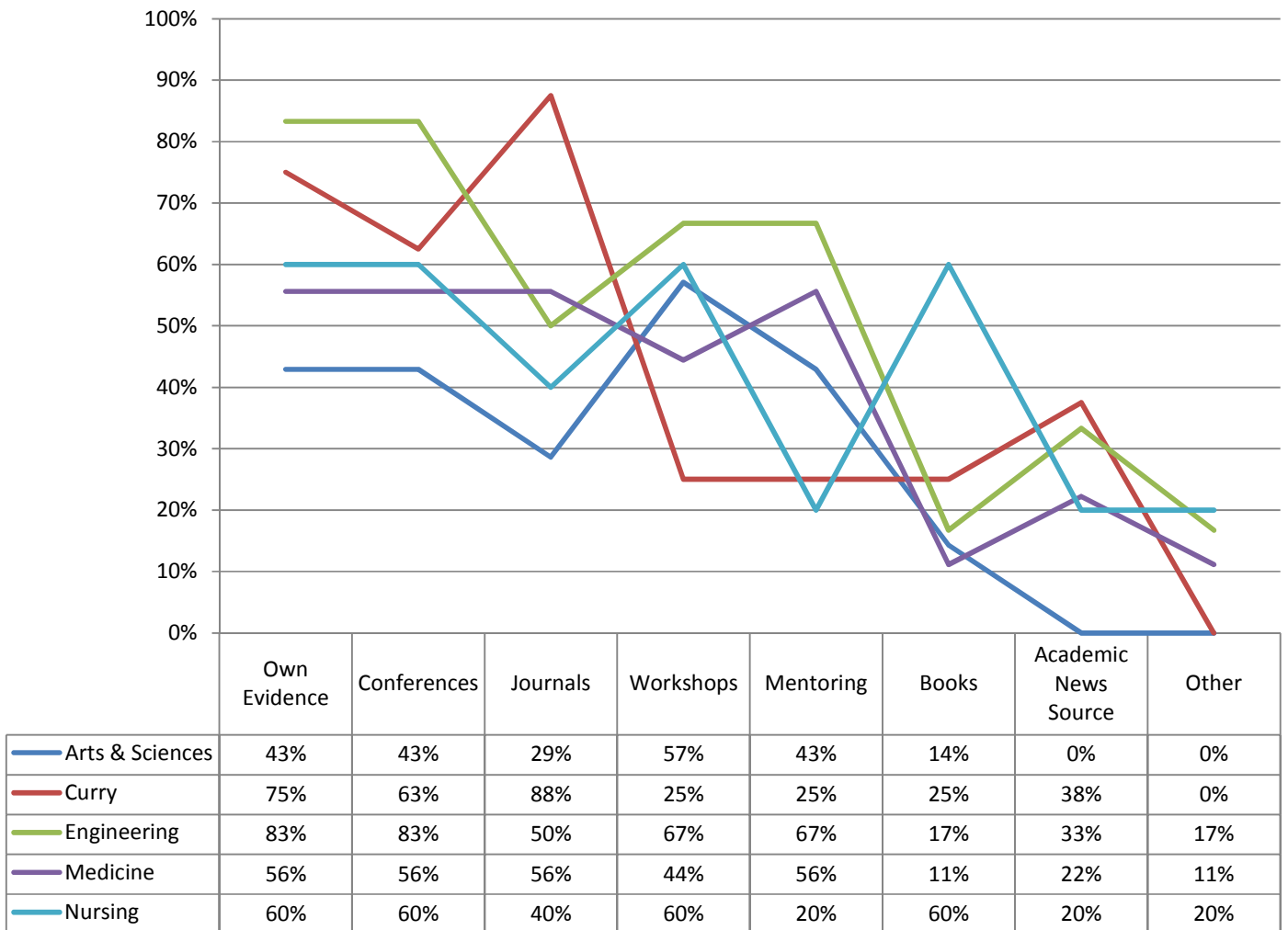
A series of questions queried how respondents actually used evidence in their educational practice. Over 80% of respondents indicated that they regularly changed their course content, pedagogy, and/or organization based upon educational evidence. Figure 10 (next page) shows the sources of evidence used by respondents to make these course changes. At least half of all respondents changed their course content in light of evidence that they had either gathered themselves (65%) or discovered at conferences (61%), in journals (59%), through workshops (52%), or by participating in mentoring (50%). “Other” sources of evidence offered by respondents included accreditation bodies, input from colleagues, and student feedback.

Figure 10
Evidence Sources Used by Position



As with previous survey items, responses to this question varied by school (see Figure 11, next page). For example, respondents from the Curry School of Education reported the highest percentage of use for journal evidence (88%), but the lowest percentage of use for evidence from workshops (25%). Also notable is that respondents from the School of Nursing reported the highest level of use for evidence found in books (60%), while no respondent from the College of Arts and Sciences reported use of evidence found in academic, a phenomenon unique among the five schools charted.

**Figure 11
Evidence Sources Used by School**



Finally, respondents were given two open-ended questions regarding whether or not they generated their own evidence of educational effectiveness and if they chose to disseminated their results. Nearly 70% of respondents indicated that they did generate their own evidence while 61% disseminated their results. Examples of evidence generated included pre/post-test assessments, learning portfolios, formative assessments, classroom observations, quantitative analysis of learning gains, correspondence from former students, and student evaluations of

teaching after each major course segment. Popular venues for dissemination included: presentations at national conferences, disciplinary meetings, and teaching workshops; publication in both research and practitioner journals; internal communications within academic program; posting to websites and listservs; and conversations with faculty mentees.

CONCLUSION

When interpreting the results of this study, it is important to keep in mind that respondents self-selected into the sample in two ways. First, they chose to attend the Inaugural Academic Symposium, and second, they chose to complete the voluntary survey. Thus, the data gathered from this survey should not be understood as generalizable to the university population as a whole. The data does, however, provide a snapshot of the perspectives and practices of those individuals at the university who are highly motivated to improve classroom pedagogy. The results of this study illustrate that perspectives and practices differ even among individuals who share a similar level of motivation. Consequently, those attempting to engage in educational reform at the institutional level should be mindful of differences by discipline and position, as these characteristics appear to influence personal viewpoints and behavior. Though differences persist, the sample's diversity suggests broad support for using evidence to improve postsecondary teaching at the University of Virginia, an encouraging finding for educational reform advocates.