Valuing and Evaluating Teaching in the Mathematics Faculty Hiring Process

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Introduction

A number of articles have been published online and in the *Notices* offering advice for graduate students and others seeking faculty positions in mathematics departments.[1] Although the advice shared in these articles is undoubtedly useful, much of it is based on the authors' anecdotal experiences applying for jobs or hiring new faculty members. Motivated by my interest in preparing graduate students to communicate clearly about their teaching effectiveness while on the job market, I decided to pursue some more-systematic research into the academic hiring process in mathematics.[2] To that end, I conducted a survey of hiring committees during the summer of 2006. The survey was designed to determine (a) how these search committees valued the teaching effectiveness of applicants, especially in comparison with the applicants' potential for research, and (b) how the committees evaluated the teaching effectiveness of applicants in initial application materials, especially teaching statements, and in later interviews and other interactions. The survey replicated and extended the work of Meizlish and Kaplan, who surveyed faculty hiring committees in six other disciplines and encouraged me to build on their work by conducting a similar survey in mathematics. Results of the Meizlish and Kaplan survey are available in [9] and [4].

Methods

Potential survey respondents were determined by analyzing job advertisements on the American Mathematical Society's Employment Information in the Mathematical Sciences website, `http://www.ams.org/eims`. All such advertisements available on November 17, 2005, were collected. Of these 563 advertisements, 270 were found to be ones made by departments of mathematics at colleges and universities in the United States that could result in the hiring of tenure-track assistant professors.

During the summer of 2006, these 270 job advertisements were analyzed to determine the kinds of application materials requested by hiring committees. At this time, 19 advertisements were discarded because of insufficient information about requested application materials. Then the survey mentioned above, a 16-question online survey, was sent to the chairs of the search committees associated with the remaining 251 job advertisements.[3] A total of 156 surveys were completed, yielding an overall response rate of 62%.[4]

As the survey data made clear, departments at different types of institutions value and evaluate teaching effectiveness differently. Thus, many of the results presented here are categorized using the groups used to classify departments in the AMS Annual Survey. Departmental Groups I, II, and III are composed of doctoral-granting departments, ranked by "scholarly quality of program faculty" [6]. Group M contains departments granting a master's degree as the highest degree. Group B contains departments granting a baccalaureate degree only. Since job advertisements from statistics and applied mathematics departments were not included, Groups IV and V are not used.

Figure 1 shows the proportion by departmental group of tenure and tenure-track hires made by mathematics departments during the 2004–05 hiring season [6], as well as the proportion by

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[1] *Examples of such articles include [8] and [3], and further examples can be found in the references of [8].*

[2] *See [9] for a review of the literature exploring the academic hiring process in other disciplines.*

[3] *See* `http://www.derekbruff.com/research/hiring_study.htm` *for a copy of the survey.*

[4] *This response rate is similar to that of the Meizlish and Kaplan study [9], 61%. As they point out, this response rate exceeds the response rates in other, similar studies as well as the response rates typical of online surveys.*

departmental group of the job advertisements and survey responses included in this study. Although this study concerns the 2005–06 hiring season, not the 2004–05 hiring season, Figure 1 provides some evidence that the results of this study are reflective of the overall job market. For instance, the proportions of Group B job advertisements analyzed (39%) and Group B survey responses collected (42%) in this study are consistent with the proportion of tenure and tenure-track hires made by Group B schools during the 2004-05 hiring season (38%). Thus, Group B departments are not over-represented in the results presented here. Similar arguments can be made for the other departmental groups.

Distribution of Jobs, Advertisements, and Survey Responses Across AMS Departmental Groups

Figure 1.

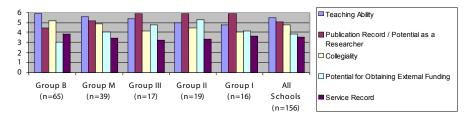Importance of Factors in Overall Hiring Process

Figure 2.

Results

Application Materials

Job advertisements were analyzed to determine the nature of application materials requested by search committees, as mentioned above. Of these initial application materials, letters of recommendation and curriculum vitae (CVs) were requested in almost all of the job advertisements (100% and 99%, respectively). Other commonly requested application materials included cover letters (60%), research statements (58%), teaching statements (54%), transcripts (42%), and letters of recommendation addressing the applicant's teaching (40%). Less commonly requested were AMS cover sheets (23%) and requests to submit materials via MathJobs.Org (10%).

The kinds of application materials requested varied by department type. For instance, teaching statements were requested by 69% of Group B schools, but only about 35% of Group I, II, and III schools. Similarly, research statements were requested by about 72% of Group I and II schools, but only 51% of Group B schools. This is consistent with differences in how these departments reported valuing teaching and research in survey responses.

Valuing Teaching

One survey question[5] was designed to determine how teaching ability is valued by search committees

in comparison to other potential factors. Among the set of all survey respondents, teaching ability was rated as a more important factor in the overall hiring process than research potential. On a scale of 1 to 6, teaching ability was rated at 5.56, while research potential was rated at 5.15, a statistically significant difference (p < 0.001). Collegiality was the next most important factor in the overall hiring process with a rating of 4.84. Not surprisingly, different institution types valued these and other factors differently. See Figure 2.

Survey results also indicate that teaching effectiveness is valued more by search committees as the hiring process continues.[6] Using the same 6-point scale, survey respondents gave teaching a 5.13 rating of importance in deciding whom to invite for first-round interviews (telephone or conference interviews), a 5.26 rating in deciding whom to invite for campus interviews, and a 5.46 rating in deciding to whom to offer positions. These differences are statistically significant (p < .0001). Survey respondents were not asked to rate the importance of other factors (e.g., research potential) at various stages of the hiring process, so it is unclear if the

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[5] *Survey respondents were asked, "Considering the overall hiring process, what importance did your committee assign each of the following factors while evaluating candidates?" Five factors were listed (see Figure 2) and survey respondents were asked to identify each factor independently as extremely unimportant, unimportant, somewhat unimportant, somewhat important, important, or extremely important. These six options were assigned the numerical values 1 through 6 during the analysis of survey responses. Results of that analysis follow.*

[6] *Survey respondents were asked, "What importance did your committee assign teaching effectiveness in making each of the following decisions?" Three decisions were listed—deciding whom to invite for first round interviews (telephone or conference interviews), deciding whom to invite for campus interviews (final interviews), and deciding whom to offer the position—and survey respondents were asked to identify the role of teaching effectiveness in each decision as extremely unimportant, unimportant, somewhat unimportant, somewhat important, important, or extremely important.*

Teaching-Related Initial Application Materials Evaluated by Search Committees
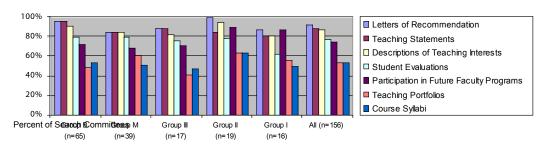
Figure 3.

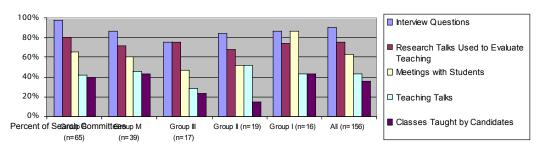Later Stage Teaching-Related Interactions Evaluated by Search Committees

Figure 4.

trend of increasing importance applies only to the role of teaching effectiveness.

Evaluating Teaching

Survey respondents were asked several questions designed to uncover the ways in which application materials and interview interactions are used to evaluate teaching effectiveness. Figures 3 and 4 indicate the prominence of these materials and interactions in evaluating teaching effectiveness. For example, almost all survey respondents indicated using letters of recommendation, teaching statements, descriptions of teaching interests, and interview questions to evaluate candidates' teaching effectiveness. Other materials and interactions were less frequently used by search committees, including teaching portfolios, course syllabi, teaching "job talks", and classes taught by candidates.

Survey respondents were also asked to rate these application materials and interview interactions on a scale of 1 to 5 according to their usefulness in evaluating the teaching effectiveness of candidates.[7] Figures 5 and 6 indicate the relative usefulness of these materials and interactions. Letters of recommendation were the most useful application materials, whereas interview questions, teaching "job talks", and research talks were the most useful interview interactions. In contrast, course syllabi were rated as less useful in evaluating an

applicant's teaching effectiveness.

Of note are the materials and interactions not commonly used but rated as highly useful by those search committees using them, including teaching portfolios, teaching "job talks", and classes taught by candidates. Also of note is the use of the research talk as a mechanism for evaluating not only a candidate's research potential, but also the candidate's teaching effectiveness. See the recommendations below for a discussion of this practice.

Successful Teaching Statements

It was expected (and, indeed, later confirmed by survey responses) that teaching statements would be frequently used to evaluate the teaching effectiveness of job applicants in mathematics, and so survey respondents who indicated they had requested teaching statements from applicants were asked three open-ended questions[8] designed to surface characteristics of successful teaching statements. An analysis of their responses to these questions revealed the following such characteristics.[9] This analysis is likely to be of particular use to those currently on the job market who are in the process of writing their teaching statements.

The most frequently cited characteristic of successful teaching statements, cited by 36% of survey respondents, was *specificity*—examples drawn from teaching experience that connected philosophy with practice. Some respondents focused on the applicant's teaching experience, such as the respondent who wanted to see a "concrete description of what the candidate has done in teaching to help students learn" and another respondent who wanted to see "specific instances of how [the

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[7] *1 = Not at all useful, 2 = somewhat useful, 3 = useful, 4 = very useful, 5 = extremely useful.*

[8] *Why did your search committee request a statement of teaching philosophy? When your committee reviewed teaching philosophy statements, what factors distinguished those that were thought to be particularly successful? What factors distinguished those that were thought to be particularly unsuccessful?*

[9] *These characteristics are consistent with the results of Meizlish and Kaplan in [9], except that the importance of a match between the applicant and the hiring institution was not as evident in their findings.*

applicant] handled some difficulty in teaching." Others focused on the connection between that experience and the applicant's teaching philosophy, e.g., "Has the candidate practiced what he/she preached?" and, "General ideas not backed by classroom anecdotes are not worth much." Another respondent objected rather colorfully to statements that "sounded contrived, disingenuous, or lacked personality (i.e., generic dribble anyone could have written)."

Another commonly cited characteristic of successful teaching statements was evidence of *dedication to teaching*, cited by 30% of respondents. Some focused on passion or enthusiasm for teaching, including one who wanted to see "the expression (explicit or implicit) of a love of mathematics and sharing it with others" and another who said, "I think the best applicants…communicated their passion for teaching." Others made comments about commitment, including one who wanted to see "evidence of commitment to undergraduate teaching, including service courses and general education courses."

Search committees also use teaching statements to judge an applicant's *writing and communication skills*, cited by 29% of survey respondents. This was evident in responses both positive ("The best teaching statements were written in a lively, engaging style that allowed the candidate's enthusiasm to shine through") and negative ("Teaching philosophy statements poorly written with spelling errors or with no organization would generally not make a good impression").

Teaching statements were also used to look for *thoughtful reflection on one's teaching*, a characteristic cited by 28% of respondents. When asked why teaching statements were requested of applicants, one respondent said that a teaching statement "gives some idea of the candidate's maturity and depth of thinking about the thinking-learning process." Another said, "We wanted to know that the applicants had seriously reflected upon not only what they do in the classroom, but also why they do the things they do."

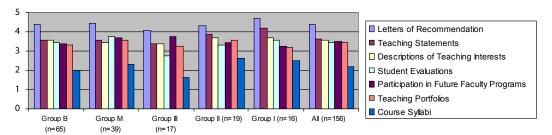Usefulness of Initial Application Materials for Evaluating Teaching Effectiveness

Figure 5.

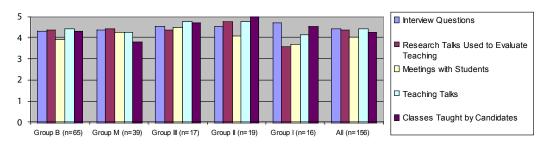Usefulness of Later Stage Interactions for Evaluating Teaching Effectiveness

Figure 6.

Another commonly-cited characteristic of a successful teaching statement was evidence of the idea of *student-centeredness*, cited by 24%, an idea that combines an interest in student success with a responsiveness to individual student learning needs. Some focused on the applicant's attitude toward students, such as the respondent who was looking for "people who convey that they are passionate, committed, and will go that extra yard in assisting students." Others emphasized the applicant's availability to students, e.g., "Candidates who were not available to students or did not spend any time with students outside of class were not successful." Other respondents made clear that being student-centered involves responding appropriately to different kinds of students. For example, one respondent said that unsuccessful teaching statements often featured a "failure to recognize that many students are not motivated by a quest for pure knowledge. An effective teacher must be able to find many different ways of motivating students in service courses and general education courses."

Successful teaching statements also conveyed a sense of *match between the applicant and the hiring institution*, a characteristic cited by 20% of survey respondents. As one respondent wrote, "We paid particular attention to those statements which tried to speak to teaching at a liberal arts school like [ours]." Another stated, "Teaching is the most important factor in both tenure and promotion decisions at our institution. It is in the candidate's

and institution's best interests to make sure we are 'on the same page' when it comes to pedagogical matters."

Of note was one response that "obviously cribbed [teaching statements] were quickly discounted." There is some disagreement over the extent to which copying another person's teaching statement is academically dishonest.[10] However, if a teaching statement must satisfy the specificity criterion mentioned above—and thus feature specific classroom anecdotes—in order to be an effective one, then copying another person's effective teaching statement would involve passing that person's classroom anecdotes off as one's own. This action would seem to ethically complicate the act of copying someone else's teaching statement without citing that original author—already an ethically questionable act.

In [3], Grundman provides advice for graduate students writing teaching statements, and this advice is largely consistent with the survey results presented here. The primary exception is the lack of any indication in the survey results that hiring committees are looking for "ways in which [one] want[s] to grow as a teacher" in teaching statements, as Grundman claims in [3]. However, given the open-ended nature of many of the survey questions, that might indeed be the case.

Recommendations

Recommendations for Future Job Seekers
 • In the overall hiring process, research potential is viewed as more important than teaching ability at schools in Groups I, II, and III. However, keep in mind that 68% of fall 2005 tenure or tenure-track mathematics hires were made by schools in Groups B and M, where teaching ability is viewed as more important than research potential. Pursuing your research agenda to the exclusion of the development of your teaching skills and experience can limit your ability to find positions at these schools.

 • Almost 92% of search committees indicated in their survey responses that they used letters of recommendation to evaluate an applicant's teaching effectiveness. Furthermore, such letters were rated as the most useful application material for doing so. While you are teaching, ask a mentor or supervisor to observe you teach several times so that he or she will be in a position to write a persuasive letter when you go on the job market. As one survey respondent stated, "It seems to be helpful to have…a letter from a faculty member supervising the course taught by the candidate discussing their strengths and weaknesses as an instructor and how to interpret any student evaluations that may be included in the application."

 • While not as important in the hiring process as some might think, student evaluations were rated as almost as useful in evaluating teaching effectiveness as teaching statements and several other materials. Be sure to seek out and archive student feedback on your teaching. If your department's course evaluation forms do not elicit much of this kind of feedback from students, you may need to seek out more meaningful feedback on your own.

 • Participate in a future faculty preparation program designed to improve your teaching skills. Records of participation in such programs were rated as almost as useful in evaluating applicants' teaching effectiveness as teaching statements. If your department does not provide such a program, your institution may have a Preparing Future Faculty program or a teaching center that provides this kind of development opportunity.[11]

Recommendations for Current Job Applicants
 • Take the list of application materials in job ads with a grain of salt. Of the survey respondents whose job advertisements did not request teaching statements, 88% indicated that they had, in fact, evaluated teaching statements submitted by candidates and found them useful for evaluating an applicant's teaching effectiveness. Similarly, student evaluations and teaching portfolios were requested in about 2% of job ads, yet a majority of survey respondents indicated that they did, in fact, evaluate these application materials and found them useful. Some search committees may be assuming that you are going to submit these materials, even if they do not request them. Indeed, a number of survey responses were made to that effect. If you are not sure about the application materials you should submit to a particular institution, then ask the hiring institution.

 • When writing your teaching statement, consider the characteristics of successful teaching statements identified by survey respondents that are listed above. The Center for Research on Learning and Teaching at the University of Michigan has developed a rubric, [5], for assessing teaching statements that is based on the research by Meizlish and Kaplan in [9]. This rubric can be used to determine the extent to which your teaching statement exhibits these characteristics.

 • Prepare for teaching "job talks" and teaching demonstrations, used by 44% and 37% of search committees, respectively, during campus interviews. Both types of interactions were rated as highly useful in evaluating applicants' teaching effectiveness by survey respondents. One respondent wrote, "[Candidates] need to spend as much

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[10] *See [1] for discussion of a faculty member ostensibly fired for plagiarizing another's teaching statement.*

[11] *For readers not familiar with these kinds of initiatives, see* http://www.preparing-faculty.org *for more information on the national Preparing Future Faculty program and [7] for an introduction to teaching centers.*

time preparing their teaching presentation as their research presentation. Practicing in front of a seasoned teacher or class who could give feedback would be useful." Another wrote, "Be sure the candidate is ready to teach a 'demonstration class' to real live students as part of the interview process. This is a critical indicator to hiring committees—a good job here can clinch an offer; a bad one (mumbling, getting lost, running beyond the time limit) can be the kiss of death for a liberal arts job."

• Bear in mind that when you give a research talk as part of a campus interview, the hiring committee may be using this talk as a way to evaluate your teaching ability, not just your research potential. As noted above, 76% of survey respondents indicated doing so. If you are asked to give a research talk, clarify with the search committee who the audience will be and what kind of a talk will be expected of you. Is the purpose of the talk to inform the faculty of the nature and scope of your research? Or is it to communicate your research in such a way that undergraduates can make some sense of it? Or is it to gauge your ability to actively engage undergraduates in a classroom? See also [8] for further advice.

Recommendation for Doctoral Programs

• Teaching is playing an increasingly important role in your graduates' ability to obtain faculty positions. Although research potential is more important than teaching effectiveness at Group I, II, and III schools, 68% of fall 2005 tenure or tenure-track mathematics hires were made by Group B and M schools where teaching is rated as more important than research. Furthermore, when asked if there has been a change in their departments in the last five years in the emphasis placed on teaching in the evaluation of job candidates, 19% of Group I, II, and III schools indicated an increased emphasis on teaching. Only 6% indicated a decreased emphasis, with the remaining respondents indicating they did not know or had observed no change. Reasons cited for an increased emphasis on teaching included increased demands for accountability in higher education as well as better candidates and tighter job markets. Preparing your graduates to teach effectively and communicate that ability during the hiring process is increasingly likely to improve their chances of landing faculty positions at the fullest range of institutions.

• Provide meaningful letters of recommendation addressing teaching. As noted above, almost 92% of survey respondents indicated using letters of recommendation to evaluate applicants' teaching effectiveness, and such letters were the most useful application material for doing so. As one survey respondent wrote, "It is extremely helpful to have several letters of recommendation from faculty members who have observed the candidate teach, preferably several times."

• Give graduate students opportunities to teach, especially opportunities to teach their own courses. As mentioned above, when hiring committees read an applicant's teaching statement, they often look for examples drawn from the applicant's teaching experience that connect philosophy with practice. Applicants without significant teaching experiences will not be able to provide such examples. Furthermore, when asked to give advice to doctoral programs, the most frequent piece of advice, cited by 16% of survey respondents to this open-ended question, was to provide graduate students more teaching opportunities. The following response from a Group I department is a typical response: "Provide teaching assignments where the candidate has full charge of all aspects of the course, not just a grader or lab assistant."

• Provide training programs designed to improve graduate students' teaching skills. This is important not only because of the role teaching plays in the hiring process in general, but also because records of participation in future faculty preparation programs were rated as about as useful in evaluating applicants' teaching effectiveness as teaching statements and student evaluations. One survey respondent wrote, "Stronger preparation in areas of curriculum, pedagogy, learning assessment, and student interaction would be very much appreciated by those departments who place a high priority on teaching effectiveness." Another wrote, "Recommend books for students to read about teaching. Some formal discussion of teaching and curriculum issues could be helpful. Encourage graduate students to watch effective teaching in the classroom." Furthermore, helping graduate students develop effective and efficient approaches to their teaching can help them become "quick starters" as junior faculty, [2]. See the recommendations for future job seekers above for resources useful for developing these kinds of training programs.

Recommendations for Hiring Institutions

• Consider a variety of initial application materials. Although letters of recommendation addressing teaching were rated as most useful in evaluating an applicant's teaching effectiveness, a number of other materials were essentially tied for second place in terms of utility. Consider requesting teaching statements, descriptions of teaching interests, student evaluations, and teaching portfolios, all rated as highly useful.

• Be intentional about requesting application materials in your job advertisements that you expect to evaluate. As noted above, 88% of the survey respondents who did not request teaching statements reported evaluating them anyway, and they found them as useful as many other application materials in evaluating applicants' teaching effectiveness. Of the survey respondents who indicated they had not requested teaching statements, 21%

said they had not done so because they assumed applicants would submit them whether or not they were requested. As Meizlish and Kaplan note in [9], such mixed messages "can be problematic, especially for students who are not familiar with academic cultures (first-generation college or graduate school attendees) or those who receive less mentoring (oftentimes underrepresented minority students and women in the sciences)."

• Consider a variety of campus interview interactions. Although only 37% of search committees asked an applicant to teach a class during a campus interview, those that did rated it as almost as useful in evaluating teaching effectiveness as interview questions about teaching. Similarly, only 44% of search committees asked candidates to give teaching "job talks", but those that did found them equally as useful as interview questions. The format and audience for these kinds of talks likely varies from campus to campus, but one useful model for such talks is the "pedagogical colloquium" described in [10].

• Reconsider using candidates' research talks to evaluate their teaching effectiveness, if that has been your practice. As noted above, 76% of survey respondents indicated that they do so and find the research talk a useful mechanism for evaluating teaching. Although a research talk can provide a sense of a candidate's public speaking ability, there is a significant difference between talking about one's research to a group of experts and teaching first-year college students calculus. The research talk does not typically allow a candidate to demonstrate many of the teaching skills that are needed to effectively teach undergraduates. Furthermore, it does a disservice to candidates if they are not aware that their research talk, ostensibly part of the interview process to evaluate their research potential, is also being used to evaluate their teaching effectiveness. See Meizlish and Kaplan, [9], for more on this problematic practice.

• Discuss among your hiring committee the characteristics of successful and unsuccessful teaching statements, perhaps by starting with a discussion of the characteristics listed above. Being more specific about these characteristics can assist in the evaluation of teaching statements (perhaps by using some kind of shared rubric similar to the one developed at the University of Michigan, [5]), and communicating your expectations about teaching statements to applicants might result in the submission of teaching statements that are more useful to you.

Conclusions and Next Steps

The survey results presented here indicated that mathematics faculty search committees value teaching effectiveness in job applicants and that they use a variety of mechanisms for judging an applicant's teaching effectiveness. These findings have implications for job seekers, who should work towards developing their teaching skills and communicating about those skills on the job market. Doctoral programs have a role to play in directing their graduate students' attention to matters of teaching and providing professional development opportunities for their students around teaching skills. Search committees are encouraged to reflectively consider the ways in which they assess the teaching skills of their job applicants and to be mindful about how they communicate their expectations with applicants.

Although this survey included a set of questions on understanding what search committees look for in one particular application document, the teaching statement, future surveys could focus on other application materials and interview interactions. What are useful components of a teaching portfolio? How do search committees make sense of student evaluations? What formats and functions are associated with teaching "job talks" on different campuses and how are they evaluated?

Other questions for future research include the following. Are there particular approaches to teaching, such as the use of in-class group work or technology, that are valued by certain types of departments? Or are they more interested in seeing evidence of alignment among an applicant's teaching goals, methods, and assessments? What role does the prestige or reputation of an applicant's current institution play in the hiring process? What recommendations would search committees make to doctoral programs developing "teaching certificate" programs for developing their graduate students' teaching skills? Finally, and perhaps most importantly, how is teaching effectiveness evaluated after a candidate obtains a job during the tenure and promotion process, and how do those methods of evaluation compare to those used at the hiring stage?

In spite of the importance teaching plays in the careers of many mathematicians, often mathematicians do not receive training in teaching to the extent that they receive training in mathematics research. By clarifying the role that teaching plays in the graduate student and faculty careers of mathematicians, the results of this study can help them to prepare for that role in more meaningful and effective ways.

References

[1] Thomas Bartlett, The rumor: What really cost Chris Dussold his dream job?, *Chronicle of Higher Education*, (February 10, 2006), http://chronicle.com/weekly/v52/i23/23a00801.htm.

[2] Robert Boice, *The New Faculty Member*, Jossey-Bass, 1992.

[3] Helen Grundman, Writing a teaching philosophy statement, *Notices of the American Mathematical Society* 11 (2006), pp. 1329–1333.

[4] Matthew Kaplan, Deborah Meizlish, Christopher O'Neal, and Mary Wright, A research-based rubric for developing statements of teaching philosophy, *To Improve the Academy: Resources for Faculty Instructional and Organizational Developers*, Vol. 26, (in press).

[5] Matthew Kaplan, Christopher O'Neal, Deborah Meizlish, Rosario Carillo, and Diana Kardia, Rubric for statements of teaching philosophy, (Accessed July 18, 2007), http://www.crlt.umich.edu/gsis/onedayPFF2005/TeachingPhilosophyRubric.pdf.

[6] Ellen Kirkman, James Maxwell, and Colleen Rose, 2005 Annual report of the mathematical sciences in the United States (third report), *Notices of the American Mathematical Society* **11** (2006), pp. 1345–1357.

[7] James Lang, Support your local teaching center, *Chronicle of Higher Education*, (July 20, 2007), http://chronicle.com/jobs/news/2007/07/2007072301c/careers.html.

[8] Heather Lewis and John Caughman, Tips for the job search: Applying for academic and postdoctoral positions, *Notices of the American Mathematical Society* **9** (2006), pp. 1021–1026.

[9] Deborah Meizlish and Matthew Kaplan, Valuing and evaluating teaching in academic hiring: A multidisciplinary, cross-institutional study, *Journal of Higher Education*, accepted for publication.

[10] Stanford University Center for Teaching and Learning, Promoting a culture of teaching: The pedagogical colloquium, *Speaking of Teaching*, (Spring 1997), http://ctl.stanford.edu/Newsletter/culture_of_teaching.pdf.