

The Scholarship of Teaching: Classroom Research at KU

*The Professional Development of KU
Graduate Teaching Assistants: A Survey
of Interests, Roles, and Expectations*

Fall 2000

A study for the faculty of the University of Kansas
from the Center for Teaching Excellence

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The Scholarship of Teaching

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Foreword

The Scholarship of Teaching: Classroom Research at KU is an annual publication that shares with the university community research on instruction in higher education. This second issue, "The Professional Development of KU Graduate Teaching Assistants: A Survey of Interests, Roles, and Expectations," is an initial effort to have a clearer understanding of this important group.

How does scholarship lead to improved practice? First, it creates a climate on campus for the serious discussion of teaching and learning, and it meets the intellectual challenges of teaching through continuing study and investigation. As members of the teaching faculty, we need more than awareness of what we and our students should do. We need to continually assess new information that may very likely result in challenging some of our long-standing assumptions and practices. Second, taking a scholarly approach to instruction encourages active inquiry about our teaching and our students' learning.

Research suggests that although not all GTAs become professors, virtually all professors have been GTAs. Professors report that, however limited it may have been, this experience remains the major preparation for their teaching responsibilities (Nyquist & Sprague, 1991). What are the interests of GTAs who come to KU? Upon their arrival, what roles do they fulfill for the University? As instructors, what are their areas of strength and need? We sought to find answers to these questions through a 39-question survey.

The intent of the survey and review of current research is to provide the KU community with information about the graduate teaching experience. We highlight the findings, offer perspectives of those findings, and end with implications and guidelines that departments and the University may consider. We acknowledge that the survey data is but a first step in gaining a better understanding of GTAs' experiences, expectations, and roles at KU. With a better perspective and understanding, we can position ourselves to better meet the professional and instructional needs of this important component of the university community.

Fred Rodriguez, Director
Center for Teaching Excellence

INTRODUCTION

The graduate teaching assistant (GTA) model as it currently exists has been the product of institutional and historical factors. Originally based on an apprenticeship model, teaching assistants directly assisted professors in a specific course, primarily by grading and preparing class materials. To accommodate more students during the boom period of the 1960s and 1970s, many institutions of higher education increased the number of large classes being offered and supplemented them with small discussion or laboratory sections led by GTAs. Later, the employment of GTAs to perform a wider variety of instructional tasks—including conducting discussions and laboratory sessions, holding office hours, lecturing, and even assuming total responsibility for teaching a course—became accepted practice in many institutions of higher education.

Today, university constituencies, researchers, parents, alumni, students, and GTAs have challenged this heavy reliance on often inexperienced and untrained instructors for the teaching of undergraduates, particularly in lower division courses (Boyer, 1990). Nationally, for example, GTAs provide instruction for roughly 40% of the undergraduate courses in research and comprehensive universities, and they have teaching responsibilities in approximately 60% of the introductory courses taken by first and second-year undergraduates (Marincovich, Prosko, & Stout, 1998). Universities such as the University of Kansas do rely on graduate students to teach courses or handle instructor-related work that they cannot afford to address otherwise, and this practice is likely to continue.

Ambiguity and perception

Through the years, the title “graduate teaching assistant” has been possibly one of the most ambiguous in higher education. The assistantship is most often a form of financial aid for the graduate student. In return for full or partial tuition reimbursement and a stipend, the university receives the assistance of someone who sets up a lab or computer station, leads a discussion section, assists with a large lecture course, or designs and solely teaches courses. For many graduate students, the role of a GTA is an apprenticeship and preparation for a career as a faculty member.

However, there have been growing concerns about the way graduate students are used as instructors and teaching assistants and how various trends in higher education have led to an increase in such instruction. One such trend is the expansion of undergraduate enrollments; another is the more rapid growth in the number of students admitted to graduate study. There are also changing patterns in the professional work of the professor and in financial support of the graduate student. Students themselves, both

undergraduate and graduate, have changed in backgrounds, experiences, expectations, and interests. Critics contend that whatever role GTAs do serve, they are too often unsupervised.

In addition, we are now beginning to understand the actual costs of this approach to the professoriate, which discourages careers in higher education and thus contributes to the national shortage of new professors. If GTAs do choose to enter the professoriate, often their lack of adequate training during their experience results in the need for very expensive remedial actions later such as reduced loads to improve teaching effectiveness, hours of mentoring by members of their departments, or failure to achieve tenure and thus loss of potential members of the next generation of professors.

The skimming effect: Who fulfills the teaching role?

As Sullivan (1991) reported, the teaching assistant is often the only source of financial aid departments have to attract and maintain graduate students. At most institutions, the teaching assistantship is not considered the most prestigious or attractive award, nor is it the most lucrative financial support available. In many disciplines, where competition for graduate students is intense, a student who receives "only" a teaching assistantship from a department may well choose to attend a different institution that offers

better funding. Fellowships, on the other hand, usually are awarded to the very best students and provide a stipend without any work requirement. Fellowships thus maximize the time that students have available for their own research and scholarship. Research Assistants (RAs) usually require work in exchange for research experience, but they offer the possibility of close faculty mentoring and perhaps even a co-authored publication as a result of this collaborative relationship. The growing pressure to secure external funding to support such efforts is at an all-time high at research universities. In many respects, it is only natural that faculty seek out the most talented students available as research assistants. Fellowships and research assistantships can conceivably skim the best and brightest graduate students, leaving teaching assistantships to students who fulfill the teaching mission of the institution.

This hierarchy of funding mechanisms is reinforced by some agencies external to the university that support graduate study. The most prestigious national support programs are the graduate fellowships sponsored by such agencies as the National Science Foundation (NSF). In addition, ethnic minority students, who often have greater financial need than other students, are particular targets for some fellowship programs, because the larger stipends serve as a response to financial need as well as to merit. Also, traineeships sponsored by agencies such as the National Institutes of Health (NIH) appear more prestigious; these traineeships, which function much like RAs with a work

requirement, are usually provided to institutions rather than to individual faculty for rewarding graduate students. By contrast, external support for teaching assistantships rarely occurs, perhaps because the teaching function is seen as one within a university's domain.

Not only are the best graduate students likely to become fellows or research assistants, but also that status often remains unchanged throughout their graduate student career. The competition that looms in the future for hiring sufficient numbers of qualified faculty already exists in today's competition for top graduate students.

This current situation can produce negative results for both individual graduate student and for the profession. Fellows or research assistants who may want to teach may find that their universities express little interest to them about teaching and instead stress their research skills and potential scholarship. Because of their lack of teaching experience, fellows and research assistants may be steered toward careers in industry or government without even experiencing the instructional side of higher education.

How serious the skimming effect becomes will depend in part on the current supply of potential graduate students and on the demand for Ph.D.s within each discipline. Within at least some fields, however, the skimming effect is already underway. Unless departments and universities make diligent efforts to provide positive teaching experiences for top graduate students, we will miss this important target group.

Institutional responses

Graduate students are used in every major university in the teaching of undergraduate students. Properly utilized GTAs can be effective, but this requires an organized program of training and supervision and a recognition of the emerging professional status of the graduate student. The entire process requires continual assessment by departments and universities.

Well-designed programs that are clearly targeted and attractively presented to graduate students may benefit these students—as well as undergraduate students and universities as a whole—in several ways. Programs can provide training necessary for effective instruction of undergraduate students. GTAs who are interested in careers in higher education can develop skills and acquire knowledge in both the theory and pedagogy of teaching at this level, thus reducing the need for remedial programs for beginning professors. In addition, because of their successful classroom experiences, top graduate students may consider careers in higher education.

Although not all GTAs become professors, virtually all professors have been GTAs and report that, however limited it may have been, this experience remains the major preparation for their teaching responsibilities (Nyquist & Sprague, 1991). There seems to be greater recognition that learning to teach should be an integral

component of the graduate education of all who anticipate a career in higher education. If a GTA appointment is the primary means by which professors learn to be teachers, then major attention must be provided to the design, sequence, and supervision of the GTA experience as preparation for the teaching dimension of a scholar's life.

METHODOLOGY

Survey construction and implementation

To address concerns raised in the literature and for our own interests in securing a knowledge base, a 39-question survey was constructed to gather baseline information about GTAs at Kansas University. Specifically, the survey was designed to solicit information about their interests and experiences as a teaching assistant, their intentions before taking the appointment, and any strengths or concerns they had about being a graduate teaching assistant.

A portion of the survey was taken from the Nyquist and Huff text *Working Effectively with Graduate Assistants* (1996). They argue that before a department or university can begin to work effectively with their graduate teaching assistants, they must first gather sufficient data about these individuals' interests, experiences, intentions, strengths, and concerns. This survey is the beginning of just such an effort.

The survey was mailed out with a cover letter from the Center for Teaching Excellence asking GTAs to complete the survey. The letter stated that the purpose of the survey was to gather information about their GTA experience and to better understand the needs and interests of graduate teaching assistants on the Lawrence campus. Of the 946 GTAs who were contacted, 151 completed the survey (16% response rate).

RESULTS

Results of the survey are divided into two sections: 1. general responses, and 2. responses by discipline. The discipline divisions cited are humanities, natural sciences and mathematics, social sciences, and professional schools. (Programs within the College of Liberal Arts and Sciences were categorized as humanities, natural sciences and mathematics, or social sciences). Surveys returned by the professional schools were combined.

General information

In this section, the participants were asked to identify the graduate program in which they were currently enrolled, the program in which they held their GTA appointment, and their undergraduate and graduate degrees and disciplines. The remaining two questions were concerned with their intentions when accepting their GTA appointment and their personal goal for their graduate degree program. Following are the results.

Demographics

Graduate enrollment of GTAs

Humanities	23%
Natural sciences/Math	20%
Social sciences	33%
Professional schools	25%

Department where GTA appointment is held

Humanities	22%
Natural sciences/Math	19%
Social sciences	34%
Professional school	22%

Undergraduate degree

Bachelor of Arts	64%
Bachelor of Science	28%
Other (e.g. B. F. A.)	7%
International	3%

Undergraduate discipline

Humanities	25%
Natural sciences/Math	38%
Social sciences	20%
Professional schools	19%

Master's degree

Master's of Arts	34%
Master's of Science	9%
Other	18%
No master's degree	35%

No response 4%

Master's discipline

Humanities 26%
Natural sciences/Math 10%
Social sciences 31%
Professional schools 32%

Intent when accepting the teaching assistantship (multiple responses)

Summary of results from all programs

Gain college teaching experience 82%
Earn financial support 94%
Enhance knowledge of subject area 55%
Begin career as college professor 43%
Satisfy interest in becoming a professor 43%

Results by academic area:

Humanities

Gain college teaching experience 85%
Earn financial support 85%
Enhance knowledge of subject area 58%
Begin career as college professor 50%
Satisfy interest in becoming a professor 44%

Natural sciences/Math

Gain college teaching experience 70%
Earn financial support 96%
Enhance knowledge of subject area 60%
Begin career as college professor 50%
Satisfy interest in becoming a professor 56%

Social sciences

Gain college teaching experience 86%
Earn financial support 96%
Enhance knowledge of subject area 51%
Begin career as college professor 39%
Satisfy interest in becoming a professor 37%

Professional schools

Gain college teaching experience 81%
Earn financial support 95%
Enhance knowledge of subject area 47%
Begin career as college professor 34%

Satisfy interest in becoming a professor 36%

Personal goal for graduate degree program (multiple responses)

Summary of results from all programs

Doctorate degree	69%
Employment/Career	6%
Finish dissertation	1%
Academic position	16%
Professional degree or master's	11%

Results by academic area:

Humanities

Doctorate degree	62%
Finish dissertation	3%
Academic position	15%
Professional degree or master's	3%
No response	17%

Natural sciences/Math

Doctorate degree	65%
Employment/Career	12%
Academic position	15%
Professional degree or master's	8%

Social sciences

Doctorate degree	80%
Employment/Career	4%
Academic position	19%
Professional degree or master's	11%

Professional schools

Doctorate degree	62%
Employment/Career	5%
Academic position	16%
Professional degree or master's	5%
No response	12%

Interests and experiences

To better understand the current interests and experiences of GTAs, participants were asked to rank from one to five on a Likert scale (from little to extensive, with one being the least and five the most) their experience and interest in a number of categories. The Appendix contains the

complete text for each category.

Following are the overall mean scores and the mean scores by each teaching discipline for each of the 16 categories.

1. Hold office hours	Experience	Interest
Overall mean	3.9	3.7
Humanities	4.0	3.9
Natural sciences/Math	3.4	3.2
Social sciences	4.2	3.6
Professional schools	3.5	3.5

2. Assist in large enrollment classes	Experience	Interest
Overall mean	2.8	2.6
Humanities	2.4	2.4
Natural sciences/Math	2.4	2.2
Social sciences	3.5	2.9
Professional schools	2.3	2.3

3. Work with diverse students	Experience	Interest
Overall mean	3.3	4.2
Humanities	3.4	4.4
Natural sciences/Math	2.7	3.4
Social sciences	3.1	4.3
Professional schools	3.4	4.0

4. Lecture to large classes	Experience	Interest
Overall mean	1.8	2.8
Humanities	1.7	2.7
Natural sciences/Math	1.5	2.3
Social sciences	2.0	3.0
Professional schools	1.8	2.4

5. Lecture to small classes	Experience	Interest
Overall mean	3.8	4.4
Humanities	3.6	4.4
Natural sciences/Math	3.7	3.5
Social sciences	3.8	4.4

Professional schools	3.6	4.2
6. Lead class discussions	Experience	Interest
Overall mean	3.7	4.2
Humanities	3.9	4.3
Natural sciences/Math	2.7	3.4
Social sciences	3.9	4.0
Professional schools	3.6	4.2
7. Teach studio classes	Experience	Interest
Overall mean	1.3	2.0
Humanities	1.0	1.5
Natural sciences/Math	1.0	1.7
Social sciences	1.0	1.4
Professional schools	1.8	2.6
8. Conduct field work	Experience	Interest
Overall mean	2.1	3.2
Humanities	1.3	2.5
Natural sciences/Math	1.8	3.0
Social sciences	2.6	3.0
Professional schools	2.0	3.4
9. Use technology in teaching	Experience	Interest
Overall mean	2.9	3.7
Humanities	2.7	3.6
Natural sciences/Math	2.7	3.1
Social sciences	3.0	3.6
Professional schools	2.6	3.6
10. Develop writing assignments	Experience	Interest
Overall mean	3.2	3.7
Humanities	3.6	4.2
Natural sciences/Math	2.5	2.7
Social sciences	3.1	3.7
Professional schools	2.9	3.4
11. Evaluate writing assignments	Experience	Interest
Overall mean	3.7	3.7
Humanities	4.0	4.0
Natural sciences/Math	2.8	2.7
Social sciences	4.0	3.9

Professional schools	3.4	3.4
12. Develop multiple choice tests	Experience	Interest
Overall mean	2.9	2.7
Humanities	2.1	2.1
Natural sciences/Math	2.2	2.2
Social sciences	3.6	3.1
Professional schools	2.9	2.7
13. Develop essay tests	Experience	Interest
Overall mean	2.6	3.8
Humanities	3.1	3.9
Natural sciences/Math	1.9	2.7
Social sciences	2.6	4.5
Professional schools	2.5	3.0
14. Develop problem-solving tests	Experience	Interest
Overall mean	2.4	3.2
Humanities	2.2	2.4
Natural sciences/Math	2.5	3.2
Social sciences	2.2	3.1
Professional schools	2.5	3.3
15. Assign grades	Experience	Interest
Overall mean	3.9	3.6
Humanities	3.8	3.4
Natural sciences/Math	3.3	2.9
Social sciences	4.1	3.6
Professional schools	3.8	3.5
16. Design courses/construct syllabi	Experience	Interest
Overall mean	3.3	4.2
Humanities	3.4	4.2
Natural sciences/Math	3.0	3.4
Social sciences	3.0	4.2
Professional schools	3.5	4.2

Previous and current teaching experience and interests

In this portion of the survey, we asked participants to indicate the total number of times they fulfilled various teaching roles, such as the sole instructor, the grader or tutor, or as a team teacher.

In addition, we asked participants to identify the training experiences or pro-

grams that they have participated in since arriving at KU as a GTA. Forty-two percent of those who completed the survey indicated that they had some training on teaching methods or teaching effectiveness with CTE.

Finally, we asked them to rate the level of support, feedback, and observation they received from faculty, their department, and the university. We also asked them if they could choose would they choose to be a teaching assistant. (No responses are listed as NR.) Responses were provided on a Likert scale from 1 to 5. GTAs' responses are shown as follows.

Teaching roles

Sole instructor (overall, then by respondents' academic area)

	1–3 times	4–6 times	7–9 times	10 or more	NR
Overall	32%	11%	7%	20%	30%
Humanities	50%	10%	10%	30%	0%
Natural sciences/Math	38%	15%	8%	38%	1%
Social sciences	45%	20%	9%	23%	3%
Professional schools	40%	17%	13%	23%	7%

TA with own section (overall, then by respondents' academic area)

	1–3 times	4–6 times	7–9 times	10 or more	NR
Overall	35%	23%	5%	20%	17%
Humanities	29%	29%	6%	18%	18%
Natural sciences/Math	34%	19%	8%	38%	1%
Social sciences	56%	26%	4%	12%	2%
Professional schools	42%	26%	6%	23%	3%

Team teacher (overall, then by respondents' academic area)

	1–3 times	4–6 times	7–9 times	10 or more	NR
Overall	22%	7%	2%	5%	64%
Humanities	73%	11%	0%	16%	0%
Natural sciences/Math	44%	56%	0%	0%	0%
Social sciences	69%	6%	6%	19%	0%
Professional schools	59%	14%	5%	18%	4%

In your GTA role, which activities are you most likely involved in?

(multiple responses)

Summary of results from all programs

Assisting a professor	38%
Leading field trips	7%

Tutoring		26%
Grading	78%	
Holding office hours		61%
Conducting quizzes & discussions		64%

Results by academic area:

Humanities

Assisting a professor		9%
Leading field trips		0%
Tutoring		18%
Grading	82%	
Holding office hours		74%
Conducting quizzes & discussions		68%

Natural science/Math

Assisting a professor		40%
Leading field trips		17%
Tutoring		40%
Grading	80%	
Holding office hours		50%
Conducting quizzes & discussions		63%

Social science

Assisting a professor		54%
Leading field trips		4%
Tutoring		31%
Grading	82%	
Holding office hours		69%
Conducting quizzes & discussions		74%

Professional schools

Assisting a professor		39%
Leading field trips		11%
Tutoring		14%
Grading	70%	
Holding office hours		57%
Conducting quizzes/discussions	46%	

Training as a GTA since coming to KU (multiple responses)

Summary of results from all programs

Not attended a training session		7%
A training session by department		24%

More than one session by department	22%
Semester-long class by department	34%
Training session by University	69%
More than one by the University	9%

Results by academic area:

Humanities

Not attended a training session	3%
A training session by department	50%
More than one session by department	32%
Semester-long class by department	50%
Training session by University	76%
More than one by the University	1%

Natural science/Math

Not attended a training session	7%
A training session by department	30%
More than one session by department	17%
Semester-long class by department	40%
Training session by University	60%
More than one by the University	7%

Social sciences

Not attended a training session	8%
A training session by department	12%
More than one session by department	10%
Semester-long class by department	33%
Training session by University	72%
More than one by the University	16%

Professional schools

Not attended a training session	11%
A training session by department	16%
More than one session by department	30%
Semester-long class by department	14%
Training session by University	68%
More than one by the University	5%

Thinks/believes that the department supports teaching efforts

Overall mean	3.7
Humanities	3.7
Natural sciences/Math	3.2
Social sciences	3.7

Professional schools	3.5
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Department has provided helpful feedback as a GTA

Overall mean	3.6
Humanities	3.5
Natural sciences/Math	2.9
Social sciences	3.1
Professional schools	3.0

Has had opportunities to observe a peer GTA teach a class

Overall mean	2.7
Humanities	2.7
Natural sciences/Math	2.7
Social sciences	2.5
Professional schools	2.2

Have been observed teaching by a faculty member

Overall mean	2.9
Humanities	2.9
Natural sciences/Math	2.5
Social sciences	3.3
Professional schools	2.2

Have been offered feedback about teaching from a faculty member

Overall mean	2.9
Humanities	3.1
Natural sciences/Math	2.5
Social sciences	2.9
Professional schools	2.1

Feels/believes the University supports their teaching efforts

Overall mean	3.0
Humanities	2.8
Natural sciences/Math	2.7
Social sciences	2.8
Professional schools	3.0

If they could choose, would they choose to be a GTA?

	Yes	No	NR
Overall mean	74%	17%	9%
Humanities	61%	30%	9%
Natural sciences/Math	77%	20%	3%

Social sciences	73%	14%	13%
Professional schools	76%	8%	16%

Teaching strengths and concerns of GTAs

For this section, participants were asked what they believed their teaching strengths were and what their major concerns about teaching were. These were open response questions. Below is a summary of the responses by academic area.

Teaching strengths

Humanities

Ability to cover material • Assessment of students • Classroom demeanor • Command of material • Convey information • Creativity, discussion with students • Enthusiasm • Good atmosphere • High expectations • Interaction with students • Knowledge of material • Learning environment within the classroom • Love of subject • Lecture clearly • Patience • Rapport with students

Natural sciences/Math

Approachable • Available to students • Communication skills • Concern for students • Experienced in teaching • Familiar with subject • Helpful to students • Interact well with others • Knowledge of subject • Patience with students • Lead students to think critically • Motivate students • Positive attitude • Understand student's needs • Willing to help students

Social sciences

Ability to explain material • Approachable • Available to students • Communicate well with students • Concerned for students • Consistent with students • Creativity, empathy for students • Enthusiasm • Knowledge of subject • Good examples • Honest with students • Humor in classroom • Interested in students • Interested in subject matter • Interesting lecturer • Interpersonal style and skills • Knowledge of subject • Open to input • Optimism • Patience • Prepared • Accessible • Rapport with students • Relate well with students • Respect for students • Responsiveness • Speaking skills • Take role seriously

Professional schools

Approachable • Care about students • Communication skills • Consistency • Ability to converse with students • Course organization • Creative thinker • Enthusiasm • Excitement • Experienced teacher • Fair listener • Flexible • Good listener • Good with students • Knowledge of subject • Lectures relate to students, life experiences • Organized • Motivating students • Rapport with students • Reaching different students • Speaking ability • Trained as a teacher • Willing to help • Working with difficult tasks

Teaching concerns

Humanities

Attendance policies • Authority as a women • Finding a balance time between teaching and own studies • Burnout • Class size • Communicating • Grading • Incorrect information • Insufficient knowledge • Lack of administration support • Language skills • Large lectures • Limited term of GTA • Meeting students' goals • No support • Poor treatment • Students' learning and understanding • Pay • Time required • Wide range of duties

Natural sciences/Math

Providing proper attention to each student • Burnout • Consistency as a grader • Defining goals for the course • Giving students their money's worth • Help people with topic • Helping students • Knowing students • Insufficient knowledge of subject • Knowledge of material • Lack of student effort • Lazy students • Little access to creativity • Motivating students • Multimedia • Teaching the major concepts • No department or university support • Not all students learning • English not my first language • Pace of teaching • Organization of labs • Teaching skills • Time preparation

Social sciences

Affect on students • Apathy among students • Challenging questions • Cost of textbooks • Effectiveness • Fair evaluation • Facilitating discussions • Fairness of grading • Getting a job after graduation • Getting students interested • Grading • Lack of guidance • Hands-on experience • Homogeneity of classes • Impact on academic career • How to incorporate activities • Keeping students interested • Lack of training • Lecturing • Making my own course • More confident about teaching • Not enough training • Presentation style • Reaching all students • Shorter exams • Students learning material • Teaching well • Test writing • Time management • Aggressive style • Classes too large • Training from University • Use of material • Variety in courses

Professional schools

Applying material presented in class • Attention to students • Broader exposure to teaching • Classroom management • Communicating material • Conveying information • Feedback from department • Self-discipline • Fair assessment of students' work • Getting class involved • Grading • Helping students • Keeping current on subject • Keeping students interested • Lack of teaching experience • Little preparation for teaching • Public speaking • No guidelines to teaching • Presentation style • Motivating students • Low pay • Respect • Stay on task • Teaching others • Using teaching techniques

GTA orientation and training

In this portion of the survey instrument, participants were asked to respond to what they feel/believe is most needed during their GTA orientation/training or other type of professional development. A distinction was not made between department or university roles in meeting these needs.

Humanities

Facts about teaching • Critical attitudes of other GTAs • Department orientation • Disruptive students • Exam writing • Training for experienced GTAs • Information about university support • Observe good teaching • Observation and feedback • Practical experience • Realistic job explanation • Selection of texts for course • Support • Encouragement • University policies • Videotape a class • Working with students

Natural sciences/Math

Certain aspects of the course • Managing classroom environment • Communicating with students • Contact with other GTAs • Course construction • Creating student interest • Departmental support • Designing lectures • Direct guidance • Evaluations • Grading • Time management • Knowledge of resources • Mock teaching • More freedom in classroom • Motivating students • Talking with experienced GTAs

Social sciences

Classroom discussions • Changes in university's orientation • Communication with other GTAs • Departmental protocol • Training on class discussions • Effective instruction • Evaluating difficulty of work • Feedback from faculty • Meeting GTAs from other departments • Information on test writing • Informal communication with students • How to organize a lecture • Observation and feedback • More training • Organizing materials • Attending to a problem student • Specific teaching skills • Addressing students' complaints • Talking with experienced GTAs • Teaching different classes • University regulations and policies

Professional schools

Getting us together as a cohort • Consistent support groups • Discussing assessment of students • Experience in variety of teaching methods • Feedback from professors • Framework for syllabi • Generating classroom discussion • Teaching in group-work • Mentoring students • Having a mentor to call with questions • New teaching experiences • Practical application of material taught in course • Practicing classroom instruction • General rules of grading • Sharing experiences • Use of technology and the Internet • Time management

DISCUSSION

Conclusions about the survey

Though the sample size for this survey is low (16%), there are several useful conclusions that can be made from the results. First, graduate teaching assistants have multiple intentions when they accept an appointment at the University of Kansas, including in rank order: 1. earn financial support for their education; 2. gain college teaching experience; and 3. improve their knowledge of the subject matter.

In exchange for their teaching, the graduate teaching assistants receive compensation that helps them achieve their goal of completing a graduate degree. While their teaching appointment is an important part of their development, the University and departments should also focus on their development as graduate students. Research suggests that, in addition to learning the socialization process of teaching undergraduate courses, these students are simultaneously learning the socialization process of a graduate student (Braxton, Lambert, & Clark 1995). Both departments and the University should provide the necessary intellectual and emotional support and training to assist these individuals to personally and professionally develop as both graduate students and graduate teaching assistants.

As mentioned earlier, two significant roles of a research university are to prepare, support, and train teaching assistants for their present positions and to prepare them for possible future positions in academia (Bowen & Rudenstein, 1992). Seventy percent of these graduate students intend to complete their doctorate degree to gain either an academic appointment or employment outside the academy. Merton (1968) states that individuals often endorse the attitudes, values, norms, and behaviors of a group to which they aspire to gain membership. One way to shape the attitudes and behaviors of GTAs is to foster and develop the interests and experiences they have in their teaching. A portion of this survey asked the participants to rate their experience and interest in a variety of experiences that are part of being a GTA.

Based on the survey responses, these graduate students stated their interest was much greater than their experience in: 1. teaching both large and small classes; 2. using technology in teaching; 3. developing essay/problem-solving tests; and 4. designing course syllabi. Since these functions are part of being a faculty member, the departments and the University need to provide training and opportunities so that these students can fully explore their interests in these areas.

In response to the question "In your role as a teaching assistant, which are you most likely involved in," 78% identified grading. It should be noted that these individuals also stated they are uneasy about grading and providing final grades to undergraduate students. Training within the departments may pay particular attention to this issue.

Nyquist and Huff (1993) argue that graduate teaching assistants need to

feel/believe they are supported at the departmental and university level. Results from this survey suggest three ways that departments and the University could support graduate teaching assistants: 1. with initial training about departmental and university rules and regulations; 2. through observation and feedback from faculty about their teaching; and 3. by peer mentoring with more experienced graduate teaching assistants, both within and outside the department.

The Center for Teaching Excellence organizes and provides a one-day conference on teaching at the beginning of each academic year. New GTAs are required to attend. Several departments follow up with an orientation program and training. This model is typical across the country. Current research shows a significant number of GTAs are indeed offered one-day training at the beginning of their teaching career but have few training opportunities by the end of the graduate teaching experience (Shannon, Twale, & Moore, 1998). Departments and the University should pay particular attention to future follow-up sessions dealing with specific issues cited by the survey results. Perhaps a concerted effort should be established to conduct long-term training for graduate teaching assistants, in addition to the one-day requirement for new GTAs.

CTE offers several programs that GTAs may attend. Departments should encourage and support their attendance. In addition, departments should initiate a peer review model of teaching. For example, departments could encourage their GTAs to be videotaped and then provide the feedback and guidance that is necessary. This need for feedback was expressed by GTAs from all disciplines in terms of their interest and need for professional development. This suggestion is one solution to the problem identified by Shannon, Twale, and Moore (1998), who state that because faculty are too busy worrying about their own teaching, they have little time to observe graduate teaching assistants in the classroom. The videotaping process allows for a more informal, less intimidating procedure to review the teaching of a GTA. Finally, GTAs who are in the third and fourth year of teaching are an invaluable resource for new GTAs. Formal and informal opportunities should be created at the department and university level to allow these individuals to interact, observe each other in the classroom, studio, or lab, and share information and experiences.

Future implications and assessment for KU

Literature on the changes in and the future of higher education proliferates in newspapers, journals, and books. Trends such as the increasing diversity of the student population, advances in instructional technology, competition from private industry to provide education, and combining work and study hold the potential for dramatically changing the roles of future faculty. Several essays (Barr & Tagg, 1995; Cox & Richlin, 1993; Dolence & Norris, 1995; Obligner & Rush, 1997; Smith & Waller, 1997) identify patterns in the way in which education has been

structured and delivered and predict changes that will take place in the future. They stress that the future of higher education will be moving in these directions:

From:

- a focus on teaching
- one-way classroom communication
- predesigned sequence of course content settings
- learning during a particular span of the life cycle
- standardized assessment
- competition

To:

- a focus on learning
- interactive communication
- student-sequenced learning
- live settings
- virtual settings
- lifelong learning
- outcomes and performance assessment
- collaboration

What do these directions suggest for preparing graduate students to teach? To begin with, if totally new ways of conceiving higher education come about, there may be a need for significantly fewer teachers; thus, other ways of supporting graduate education might need to be pursued. Tate (1995) speculates that production, delivery, and certification organizations may begin to deliver education commercially. Boundaries between place of employment and place of learning, or between place of learning and home, might blur. In this scenario, residential instruction would be more the exception than the norm.

Even if, as it is quite possible, a less dramatic future is in store, the skills and knowledge base of graduate student teachers and of future teachers in higher education and professional settings generally will likely need to include the following (Chism, 1998):

- A deeper understanding of one discipline along with an appreciation for interdisciplinary connections
The traditional focus on teachers as content matter experts is not likely to change, but as information shifts and proliferates rapidly, the ability to know how to access and evaluate information in a field and relate ideas and approaches of other fields will continue to grow in importance.
- Skill in interactive pedagogy
If the emphasis changes from "teaching as telling" to a focus on helping others learn, the task of the teacher changes from the notion of information transfer to facilitating "learning to learn." Working with students to help them learn how to access and use information is quite different from presenting information: it requires interaction with the learner and coaching skills. These teaching skills are not learned implicitly as a graduate student masters a discipline, but only through explicit concept-building, observation, practice, and reflection.

- **Understanding student learning**
In order to be a learning coach, a teacher must have some model of the variety of ways in which students learn and how to facilitate these. Again, explicit attention to exploring the nature of learning would be a part of a graduate education.
- **Knowledge of instructional design**
Those graduate students or faculty who are designing instructional units will need to have a sophisticated knowledge of design principles. Rather than developing materials in idiosyncratic fashion, they will need to understand principles of sequencing, screen design and effective visual presentation, redundancy, the use of examples, and such conventions as hypertext glosses and branching options.
- **Teamwork**
While basic technical knowledge and computer competencies will likely be required in tomorrow's postsecondary teacher, the ability to work with a team in designing and delivering instruction is perhaps even more important. Graphic artists, videographers, programmers, systems analysts, and others—along with subject matter specialists—will likely be involved in developing instructional units.
- **Links with experience**
Materials, whether for the course as it has been traditionally delivered or in one of the future scenarios, will need to be linked more closely to the workplace and everyday life settings. Already a shift from lock-step education to stop-in/stop-out learning is occurring. Faculty in traditional settings are observing that they have more non-traditional learners and that traditional students are in the workplace as they study. Accordingly, graduate students in present or future teaching roles will need to learn how to engage students in the application and evaluation of knowledge and link it with students' experience.
- **Appreciation for difference**
Similarly, as the student population increases in diversity, college teachers in the future will more frequently be called upon to know how to build on life experience, cultural background, learning style, and other dimensions of difference to help students relate their prior experiences to new information and to use their strengths to influence the development of new knowledge.
- **Assessment techniques**
As assessment strategies focus on certification of performance rather than

short-term recall or seat time at an institution, future postsecondary teachers will need to understand principles of assessment, including delineating outcomes, devising authentic tests, and developing scoring rubrics and other strategies for assessing learning effects.

- An understanding and facility with human relations
As teaching professionals work with teams on instructional development projects, skills in dealing with the interpersonal dynamics of these teams will be important.

Guidelines for self-assessment

According to Eison and Vanderford (1993), there are several self-assessment guidelines that department members can review to gauge their approach to GTA development and training. Clearly, these should not be construed to be a template but as suggestions for consideration.

Guideline 1: GTAs should be provided with a substantive orientation program designed to facilitate their introduction to both their department and their teaching assignment.

Departments have one opportunity to make a strong and positive first impression on their GTAs; a thoughtfully designed and skillfully implemented orientation program can create this type of first impression.

For purposes of self-assessment in this area, department members might want to ask themselves the following questions:

- Are GTAs given adequate advance notice and sufficient information about the department's orientation program and their upcoming teaching assignment to increase interest and motivation rather than create unnecessary stress?
- Do the planned orientation activities offer GTAs a comprehensive introduction to the people in, and policies of, the department?
- Do the planned orientation activities provide enough guidance and instruction to raise GTAs' confidence in their ability to be successful as both classroom instructors and students?
- Do the planned activities include sessions on teaching methods needed in the first weeks of class (e.g., what to do on the first day, creating a supportive classroom environment, facilitating discussions)?
- Do the planned activities provide adequate opportunities to address the unique instructional challenges facing international teaching assistants?
- Do the planned activities enable GTAs to form a strong support network with both their faculty and peers?
- Do the faculty members and staff who facilitate the orientation activities

demonstrate the professional competencies and personal attributes that provide GTAs with a compelling model of dedication to excellence?

Guideline 2: GTAs should be provided with a comprehensive set of written materials that assist them in their initial teaching efforts.

One of the most common problems that GTAs experience involves not having enough time to meet both their teaching and academic responsibilities; instructional materials should be developed, therefore, to help maximize GTAs' efficiency in meeting their instructional responsibilities.

- Are materials given to GTAs describing department policies and procedures written in a thorough, thoughtful, and well-organized manner?
- Are GTAs provided sufficient written material to prepare them for the course they have been assigned to teach (e.g., an exemplary syllabus to follow, samples of handouts and/or visual aids to enhance class presentations, several well-constructed examinations)?
- Are GTAs provided adequate information about instructional resources available from various campus units?

Guideline 3: GTAs should be provided with periodic, discipline-based, instructional skill-building training programs.

- Are GTAs offered a systematic series of workshops that provide a discipline-based context for enhancing their understanding of the teaching/learning process and for further developing instructional skills?
- Does the department offer adequate incentives to encourage active and regular participation by GTAs in these programs?
- To what degree have seminars and workshops addressed GTAs' major instructional issues and concerns and modeled instructional excellence?
- To what degree have seminars and workshops provided participants with handouts, article reprints, and bibliographic materials to assist their post-workshop learning efforts?
- Are experienced GTAs actively involved in designing and conducting training activities for their colleagues in the department?
- Have seminar planners solicited appropriate evaluation feedback from participants to revise and improve subsequent programs?
- Are more intensive opportunities for individual assistance routinely provided for and used by GTAs with special needs in instances in which workshops and/or other types of group training are not enough?

Guideline 4: GTAs should be observed in action periodically in the classroom and provided with appropriate feedback.

- How often is each GTA's teaching observed by his or her supervisor and is this schedule sufficient to provide the GTA with needed feedback?
- Are GTA supervisors skilled in sound classroom observation techniques?
- How helpful and effective is the supervisor-provided feedback in assisting the GTA's efforts to improve his or her teaching?
- Are more experienced and talented GTAs used by the department as peer observers and mentors to assist less experienced GTAs?
- Is videotaping and collaborative viewing by the GTA and GTA supervisor used to supplement supervisor feedback following classroom visits?
- What additional types of formative evaluation data are regularly provided to the GTAs and what assistance for improvement based upon this data is provided?
- How satisfactory are existing departmental procedures or policies describing what supervisors are expected to do if a GTA's teaching performance fails to meet minimum levels of accountability?

Guideline 5: GTA supervisors should meet regularly to design collaborative strategies that will enhance the effectiveness and efficiency of GTA training activities in the department.

- When discussing the role of GTAs in the department and designing GTA training activities, do GTA supervisors consider such important structural issues as GTA teaching loads and types of teaching assignments?
- Do GTA supervisors need to develop strategies to:
 1. address current GTA training needs and problems;
 2. formulate long--range training plans;
 3. enhance their own competencies as GTA supervisors; and
 4. ensure departmental compliance with standards for GTA training and supervision established in collective bargaining agreements?
- Do GTA supervisors discuss how scholarship and research on GTA training can contribute productively to departmental training efforts?
- Do GTA supervisors seek the assistance of, or collaboration with, appropriate campus units when designing or offering training activities?
- Are GTA supervisors provided with adequate time, resources, and support from the department for this important teaching function?

Final comments

The intent of this survey and review of current research was to provide the KU

community with information about the graduate teaching experience. We highlighted the findings, offered perspectives to those findings, and ended with implications and guidelines for the University. We acknowledge that the survey data is a first step in gaining a better understanding of the GTAs' experiences and expectations, as well as the roles they fulfill at KU. With a clearer perspective and greater understanding, we can position ourselves to better meet the professional and instructional needs of this important component of the university community.

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APPENDIX:
GTA Survey

Survey of University of Kansas Graduate Teaching Assistants

Please answer each of the questions to the best of your ability. This survey is intended to gather information about graduate teaching assistants at the University of Kansas. The answers you provide will be strictly anonymous and will not impact your academic program or employment with the University or your particular graduate program.

Deadline: **Tuesday, February 29, 2000**

Please return to: **Center for Teaching Excellence, 135 Budig Hall**

General Information

1. Name of your graduate department in which you are enrolled _____
2. Name of the department in which you hold your teaching appointment _____
3. Your undergraduate degree is a: Bachelor of Arts Bachelor of Science other _____
4. Your undergraduate academic discipline is: _____
5. Have you obtained a master's or graduate degree Yes No
6. If yes, please list degree and academic discipline _____
7. Your intent when accepting the graduate teaching assistant was to: (check all that apply)
___ Gain college teaching experience
___ Financial support my graduate education
___ Enhance my overall knowledge of the academic discipline
___ Begin my academic career as college professor
___ Satisfy my interest in whether or not I would consider becoming a college professor
___ Other _____
8. What is your final goal for your graduate degree program at Kansas _____

Interest & Experience

Please answer each of the following questions to the best of your ability

1. Holding office hours for students

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

2. Assisting in large enrollment classes

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

3. Working with students of diverse cultural and ethnic backgrounds

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

4. Lecturing to large classes (More than 75 students)

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

5. Lecturing to small classes (Less than 20 students)

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

6. Leading class discussions

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

7. Teaching studio classes

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

8. Conducting field work with a class

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

9. Using technology in teaching (e-mail, multimedia, computing, etc)

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

10. Developing writing assignments

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

11. Evaluating writing assignments

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

12. Developing multiple choice tests

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

13. Developing essay tests

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

14. Developing problem solving tests

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

15. Assigning grades

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

16. Designing courses and constructing syllabi

Little experience	1	2	3	4	5	Extensive experience
Little interest	1	2	3	4	5	Extensive interest

Previous and Current Experience and Teaching Interests

Please answer each of the following questions to the best of your ability

1. Identify your teaching experience, if applicable: (Courses you have taught)

course level	title of course	institution or organization
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2. Number of times you have worked in one of these teaching roles (if applicable):

Sole instructor

1-3	4-6	7-9	10 or more
-----	-----	-----	------------

TA with your own section

1-3	4-6	7-9	10 or more
-----	-----	-----	------------

Grader or tutor

1-3	4-6	7-9	10 or more
-----	-----	-----	------------

Team teacher

1-3	4-6	7-9	10 or more
-----	-----	-----	------------

other teaching experience (please list): _____

1-3	4-6	7-9	10 or more
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3. Please identify any training programs on teaching methods or teaching effectiveness programs in which you have participated:

4. How much training as a GTA have you had since coming to KU? (check all that apply)

___ I have not attended any GTA training

___ a training session by the department

___ more than one session by the dept.

___ a semester-long class by the dept.

___ a training session by the University

___ more than one session by the University

___ other _____

5. As a GTA, I think/feel that the department supports my teaching efforts
 Little support 1 2 3 4 5 Extensive support
6. As a GTA, the department has provided me helpful feedback as a GTA
 Little feedback 1 2 3 4 5 Extensive feedback
7. As a GTA, I have had opportunities to observe a peer GTA teach a class lecture
 Little opportunity 1 2 3 4 5 Extensive opportunity
8. As a GTA, I have been observed and offered feedback about my teaching from a faculty member
 Little observation 1 2 3 4 5 Extensive observation
 Little feedback 1 2 3 4 5 Extensive feedback
9. As a GTA, I feel/think that the University supports my teaching efforts
 Little support 1 2 3 4 5 Extensive support
10. In your role as a teaching assistant, which are you most likely involved in: (check those that apply)
 ___ assisting a professor ___ grading ___ holding office hours
 ___ leading field trips ___ conducting quiz/discussion sections
 ___ tutoring ___ other _____
11. If you could choose, would you choose to be a Teaching Assistant? Yes No

Teaching Strengths and Concerns

1. What do you think are your teaching strengths?
2. What are your major concerns about teaching?
3. What do you feel you most need during your TA orientation and any ongoing training?

Thank you very much for your participation with this study.

If there is sufficient interest, there may be a focus group session after the study is collected. The focus group would consist of a group of GTAs that completed the survey and were willing to discuss some of the general issues of the survey. The discussion would be in a group setting and participation would be strictly on a voluntary basis.

Would you be interested in participating in a focus group Yes No

If yes: Name _____ Email _____
 Address _____

Deadline: Tuesday, February 29, 2000

Please return to: Center for Teaching Excellence, 135 Budig Hall

(I would like to acknowledge **Working Effectively with Graduate Assistants** by Jody D. Nyquist & Donald H. Wulff. A large portion of this survey is based from this text)