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ABSTRACT

Two hundred seven graduate teaching assistants (GTAs) who had taught for a semester or longer and 322 who had not yet taught responded to a questionnaire concerning their perceptions of GTA training. The questionnaire assessed GTA perceptions and characteristics in seven areas: demographic characteristics and teaching responsibilites; training experiences; evaluations of training experiences; supervision or ongoing/follow-up training activities and evaluations of those follow-up activities; perceptions of their teaching ability and the degree to which training affected that ability; perceived needs as GTAs and the importance of various activities for meeting those needs; and overall satisfaction with their graduate teaching assistantships. Returning GTAs and new GTAs indicated that only about half of them had received or would receive any training for their assistantships. GTAs who had taught generally were satisfied with their assistantship responsibilities, felt that their department's preparation of GTAs to teach was much better than other departments, and rated themselves highly as teachers. Topics the GTAs wanted to have included in training programs were: balancing graduate school and teaching, giving and accepting criticism, handling upset students, classroom ethics, appropriateness of making exceptions to rules, saying "no" to students, and establishing authority. Contains over 100 references. (JDD)

"Graduate Teaching Assistant (GTA) Training:

The View from the Trenches"

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Graduate Teaching Assistant (GTA) Training: The View from the Trenches

Society is changing and it is changing rapidly. Dreams of visits to far off planets and cures for diseases once dreaded as killers or cripplers have become a reality. With the rapid changes comes the need for people to keep abreast of these changes. There is a need to gain more information and more sophisticated skills to deal with the intricacies of computer technology and laser surgery, to be able to communicate with more culturally-diverse people as distance between cultures is minimized through technology, etc. Graduate education seems to be becoming more necessary as these demands for information and skills increase.

However, with the increasing need for graduate education comes the increasing need to fund graduate education. Certainly few students and/or their families can afford to provide the sole funding for education beyond the undergraduate years, if indeed they can even afford to provide that much funding.

Graduate students have many possible sources for funding at many colleges and universities. One of the most used is the graduate assistantship. Two kinds of assistantships prevail: research assistantships and teaching assistantships. Teaching assistantships seem to be widely used. Eble (1987) presented the findings of colleagues who conducted an historical review of the use of graduate teaching assistantships and found that, after World War II, the major way of both supporting graduate students and teaching basic undergraduate courses was through the use of teaching assistants.

The use of graduate teaching assistants (GTAs or TAs) has many benefits for both the departments as well as the graduate students themselves. The departments get some added flexibility when they use GTAs. "Teaching assistants provide valuable services both as supporting staff and as primary instructors. The role of the GTA may be as limited as that of a paper grader or as broad as that of a part-time faculty" (Jackson, 1985, p. 288). The use of GTAs also provides an inexpensive work force since their stipends obviously do not compete with faculty salaries. The faculty get an additional benefit from the use of GTAs: Faculty become freer to teach upper-level courses, plan and execute research, and devote time to service functions such as advising, committee work, community outreach, etc. The students the GTAs teach may get some benefits, too. Often GTAs are more accessible to their students, are more empathic to their students' problems, and have more infectious enthusiasm for their field than regular faculty (Jackson, 1985). Certainly contented students can lead to a positive departmental reputation, which should be a benefit for the departments

overall.

In addition to the departmental benefits, the GTAs may have some strong reasons to desire teaching assistantships. In addition to the most obvious benefit of funding for their education, GTAs may gain some personal benefits. The experience gained from dealing with students in a classroom setting can allow the GTAs to develop some skills that will be useful in a future career: clear understanding of the content of the discipline, conflict-resolution, organizing messages, managing time, audience analysis, etc. (Jackson, 1985; Jennings, 1987). Furthermore, GTAs who aspire to careers as college instructors gain valuable teaching experience.

The benefits of the use of GTAs in higher education seem clear. Further, these benefits will impact on departments and students in a significant way because the use of GTAs is pervasive. However, the use of GTAs has at least one potential drawback: The quality of these basic undergraduate courses so frequently taught by GTAs well may have a direct effect on the health of the departments. If the quality is high, the departments' reputations will be strong and so may attract students to their programs. The converse, however, also is true. Poor quality in the basic course may damage a program severely.

The simple conclusion from this information is that effort should be put into making/keeping the quality of the teaching done by GTAs strong. Making this conclusion a reality, however, may not be as simple.

Graduate teaching assistants have two roles: student and teacher. Sometimes the needs of those two roles conflict. Also, many, if not most, GTAs enter the role of teacher with little or no background in education. While they may be somewhat proficient in the content of their field, teaching skills may be lacking.

Training programs which aid the GTA in developing the skills and techniques needed to be effective in the classroom may enable the GTAs to juggle their two roles more effectively and make up for their lack of prior training in education. Aminmansour (1987), a graduate student, stated his opinion about training programs in his speech before the National Conference on the Training and Employment of Teaching Assistants in 1986: "Many departments and colleges do not adequately prepare or train new TAs for the very challenging task that they are to perform. This leaves the new TA virtually in the dark. Not knowing what to do or what to expect can lead not only to sleepless nights, but probably to an unsatisfactory performance in the classroom as well" (p. 26). Jackson (1985) supported this belief: In "order for the institution, the GTA, and students to gain maximum benefit from the teaching assistantship the institution must insure that every GTA is prepared for his or her instructional assignment. Without the necessary training and support even the most dedicated GTAs will fail to perform their instructional duties to the greatest benefit of all concerned" (p. 288).

Therefore, quality training, or the lack thereof, should be a major concern to educators who use GTAs as part of their program.

A review of some of the literature on GTA training shows that the concern is there. Many issues concerning GTA training have been researched: approaches to and topics for inclusion in and exclusion from a GTA training program (e.g., J. D. W. Andrews, 1985, 1987; P. H. Andrews, 1983; Bailey, 1987; Davis, 1987; DeBoer, 1979; DiDonato, 1983; Jaros, 1987, Jossem, 1987; McGaghie & Mathis, 1977; Minkel, 1987; Rivers, 1983; Smith, 1972; Staton-Spicer & Nyquist, 1979; Stice, 1984; Trank, 1986; Wankat & Oreovicz, 1984); teaching and learning issues that can be applied to GTA training (e.g., Buckenmeyer, 1972; Daly & Korinek, 1980; Davey & Marion, 1987; Eble, 1981; Ervin & Muyskens, 1982; Feezel, 1974; Fraher, 1984; Franck & Samaniego, 1981; Lashbrook & Wheeless, 1978; Lynn, 1977; Mauksch, 1987; Newcombe & Allen, 1974; Scott & Wheeless, 1977; Van Kleeck & Daly, 1982); the relationship between GTA training and various outcome variables (e.g., Carroll, 1980; Sharp, 1981); reviews of literature (e.g. Carroll, 1980; Parrett, 1987); and a general overview of the entire area of GTA training published from a national conference on the subject (Van Note Chism & Warner, 1987).

In addition, there is much research that has been published concerning specific aspects of programs: campus-wide training and departmental training research (e.g., Altman, 1987; Andrews, 1987; Donahue, 1980; Fernandez, 1986; Fisch, 1987; Garland, 1983; Henke, 1987; Jackson, 1985, 1987; Jossem, 1987; Loeher, 1987; Nyquist & Wulff, 1987; Pons, 1987; Puccio, 1987; Sharp, 1981; Stelzner, 1987; Strickland, 1987), experiences with one specific training program (e.g., Altman, 1987; Barrus, Armstrong, Renfrew, & Garrard, 1974; Carroll, 1977; Chaichian, Macheski, Ewens & Backus, 1986; Clark & McLean, 1979; Costin, 1968; Donahue, 1980; Dykstra & Gelder, 1982; Ervin, 1981; Fisch, 1987; Fulwiler & Schiff, 1980; Garland, 1983; Hardy, 1983; Henke, 1987; Humphreys, 1987; Krockover, 1980; LeBlanc, 1987; Manteuffell & Von Blum, 1979; McCurdy & Brooks, 1979; Pons, 1987; Pucchio, 1987; Rose, 1972; Russo, 1982; Siebring, 1972; Stelzner, 1987; Strickland, 1987; White, 1981; Wilson, 1976; Wright, 1987; Zimpher & Yessayan, 1987), research regarding one discipline (e.g., Allen, 1976; Azevedo, 1976; Berwald, 1976; Goepper & Knorre, 1980; Golmon, 1975; Hagiwara, 1976, 1979; Hellstrom, 1984; Henderson, 1985, 1986; Hennessy, 1986; Kaufman-Everett & Backlund, 1981; Krockover, 1980; Lalande & Strasser, 1987; Lehr, 1983; Meiden, 1970; Nerenz, Herron & Knop, 1979; Renfrew & Moeller, 1978; Shultz, 1980; Spooner & O'Donnell, 1987; Szymanski, 1978; Tirrell, 1985; Toliver, 1984), research surveying three disciplines (e.g., Stokely, 1987), research noting one university's practices (e.g., Bray & Howard, 1980; Cashell, 1977; Fernandez, 1986; Humphreys, 1987; Jackson, 1985, Taylor, 1987), and graduate deans'

perceptions/information concerning training programs at their institutions (Jackson & Simpson, 1983).

However, few articles address GTA concerns regarding their training. In attempting to create training programs that would help to enhance the teaching effectiveness of the GTAs, it would seem important to discover what GTAs feel they need to have in order to perform effectively in their role as teacher. Parrett's (1977) observation from her review of literature that "the 'ideal' format should reflect the individual university's needs plus their TAs' needs" (p. 71) would seem to be good advice for creating all aspects of training programs for GTAs. Indeed, although it reasonably could be argued that the general inexperience of many GTAs might make them less capable of deciding what should be included in a training program than a more experienced educator, understanding their perceptions of what they need at least would enable a person in charge of training to acknowledge these needs and, perhaps, construct arguments as to why other topics have value for the GTAs. Yet little comprehensive research has attempted to answer the question "What do GTAs need?" Only four studies were found that have dealt specifically with this area since 1970.

In their article, "What the TA Needs, as Determined from TA Requests," Jones and Liu (1980) attempted to identify the teaching aids most requested by experienced chemistry TAs at the University of Illinois at Chicago Circle. The aids listed on a questionnaire fell into three general categories: 1) clarification of student behavioral objectives (file of pre-lab videotapes, file of old quizzes, file of old exams and file of current lecture notes); 2) assistance in improving teaching skills (videotaping of their quiz or lab section and audiotape of their quiz or lab section); and 3) access to resources (TA Center, instructional videotapes for quiz, list of educational materials available, instruction in the use of office equipment, grade books, calculators, typewriter, desk space in departmental office and ditto machine for TA use). Most-requested of the three categories were items in category 1, with 89% of the TAs in the sample requesting those items. Category 3 followed with 66% and 42% of the TAs requested items in category 2. Since only 18 GTAs responded to the questionnaire, generalizability to a broader population of GTAs is questionable. However, the researchers noted several inferences from the data collected. They found that "TAs are looking for clearer guidelines" (p. 356). Further, "even experienced TAs want to improve their teaching skills, as shown by the willingness of 56% to be videotaped in a teaching situation" (p. 356). No information was provided in this article as to what the GTAs actually received from their training.

In their comprehensive survey of GTA training in speech communication, Kaufman-Everett and Backlund (1981) collected information about GTA needs and the state of GTA training in speech communication in 1979. Questionnaires were sent to 1246 graduate teaching assistants and associate

instructors at 102 graduate departments in speech communication; 352, or 28.3%, were returned. The researchers concluded from their data that, "over four-fifths of the teaching assistants fulfill two of the most important duties of a college instructor: presenting the course content and evaluating student performance" (p. 49). These data revealed that instruction on evaluation methods, problem situations and techniques of criticizing student presentations was included in a majority of the training programs surveyed. However, discussions on lecture methods, lesson plans, learning models, and experiential methods were included in only one-third to two-fifths of orientation experiences. In this study, "50.2% of the teaching assistants felt that the orientation programs in their respective departments are not adequate preparation for college teaching" (p. 51).

Ervin and Muyskens (198?) surveyed 303 subjects involved with foreign language teaching from four universities. Questionnaires were sent to three groups of people: TAs who had training but had not taught, TAs who were teaching and faculty. Each group was asked to respond to questions concerning priorities for teacher training using a Likert-type scale for response categories. In addition, follow-up interviews were conducted with 14 TAs from two universities to gather more in-depth responses to teaching issues. Their findings suggest that inexperienced and experienced TAs differ with regard to some general training priorities: for example, inexperienced TAs tended to be extremely concerned about gaining experience and organizing and teaching their classes while the experienced TAs seemed concerned with learning what will be expected of them and what specific methods they will be expected to use in the classroom. While some differences were reported, some areas received high priorities for both groups of TAs: learning practical teaching methods and techniques, making the class interesting, making the best use of class time, and inspiring/motivating the students. The researchers conclude that "TAs and faculty agree that the primary purpose of a TA training course should be to develop specific professional skills" (p. 343). In addition, they reported their belief that "if we as TA supervisors are to improve the qualifications of our teaching assistants, it behooves us to devote considerable study to the content and activities comprising the coursework we propose to offer (or require of) them" (p. 343).

Finally, Diamond and Gray (1987a, 1987b) surveyed GTAs at eight major research institutions in the United States in 1986. Of the 4400 surveys distributed in those eight schools, 1,400 were returned for a response rate of 32%. While this response rate is rather low, the data do provide some interesting findings concerning what the GTAs stated that they felt they needed in order to be effective teachers and what they reportedly received from their institutions. One highly-requested area of preparation was

self-evaluation: 72% of the GTAs requested it but only 42% reported receiving it. In addition, 71% of the GTAs requested aid in course evaluation, but only 41% reported receiving such help; 64% requested help in learning about developments in instructional technology, yet only 19% reported receiving such information; and 60% requested aid in lecturing, while only 47% reported receiving such training. Despite this discrepancy between what the GTAs felt was needed and what was actually provided in their preparation for teaching, 93% of the GTAs reported that they were meeting their teaching responsibilities effectively and 82% reported that, generally, they received guidance and supervision that was adequate.

It is hard to draw any useful conclusions about the view of GTA training from the research found about the GTAs themselves for several reasons. First, the literature just discussed is not very generalizable. In the first article, by Jones and Liu (1980), only 18 GTAs were surveyed, they were all from one department, and their requests were focused on a very specialized list of choices. In the second article, by Kaufman-Everett and Backlund (1981), many more students were surveyed (352), but the response rate was low (28.3%) and the GTAs were all from the same field (speech communication). In the third article, by Erwin and Muyskens (1982), a similar number of subjects was included (303), but only 204 of these subjects were TAs. In addition, the TAs surveyed were only from four universities and they were all in one discipline (foreign languages). In the last study, by Diamond and Gray (1987a, 1987b), the number of responses was much greater than in the others (1,400) and the response rate of 32% was more respectable, but the data were gathered from only eight major research institutions, making the generalizability of this information to other types of GTA populations limited. Although this last article comes much closer to providing data to answer the question "What do GTAs need?," additional research of a more comprehensive nature is indicated in order to provide a more generalizable answer to this question.

The pervasive use of GTAs and the concern for quality teaching on the part of GTAs that comes with their widespread use is a current issue in higher education today. In order to come closer to the ideal program Parrett envisioned, the needs of GTAs must be considered and this consideration must be based on a more comprehensive picture of the GTAs' perceptions of their needs.

The research reported here attempts to gather perceptions from GTAs concerning GTA training, specifically from the viewpoint of returning GTAs with at least one semester's teaching experience and new GTAs who had not yet been trained and had not yet taught on their assistantship. Data from these two types of GTAs should provide a broad spectrum of perceptions from which educators concerned with GTA training can glean desired information. Specifically, then, the following research questions guided this research: 1)

What are the demographic characteristics and teaching responsibilities of the two types of GTAs? 2) What training experiences, supervision and/or ongoing/follow-up training activities have the returning GTAs engaged in and what are their evaluations of those experiences/activities? 3) What are the GTAs' perceptions of their teaching readiness or ability and, for returning GTAs, to what degree do they feel training affected that ability? 4) What are the perceived needs of GTAs and of what perceived importance are various activities for meeting those needs? and 4) What is the overall satisfaction of returning GTAs with their graduate teaching assistantships?

Method

During the 1986-87 academic year, survey questionnaires were mailed to departments offering graduate programs nationwide. Because this research focused on perceptions about training received and needed by GTAs, the logical population was all graduate teaching assistants currently teaching or about to teach in graduate programs. In particular, two populations were identified for the studies: 1) GTAs who had taught for a semester or longer, who could look back on their experience and describe what training was especially effective and what training they would like to have had, and 2) GTAs who had not yet taught, who could describe their anxieties, anticipated needs, and preferences for training.

The Returning GTA Sample

To identify a sample of GTAs with a semester or more of teaching experience, questionnaires were sent to the department chairs/heads who had responded to the chairs/heads survey described elsewhere.[1] Only departments included in the chairs/heads sample were selected to allow comparison down the hierarchy at individual schools at a later date. Chairs/heads were asked to select arbitrarily two GTAs who had taught for at least one semester to complete the questionnaires. A separate cover letter explaining the research was attached to each questionnaire, as was a postage-paid, self-addressed envelope to encourage participation. In all, 339 department/chairs were contacted, for a sample size of 678 possible returning GTAs.

Of these questionnaires, 207 usable responses were returned from 153 departments offering graduate degrees at 126 different schools. It is unclear exactly what response rate this number represents, because some of the departments included in the sample employed only one GTA per year. Others may have had no returning GTAs on staff at the time that the questionnaire was received. Using the most conservative figures, 207 usable responses out of 678 questionnaires resulted in a response rate of at least 30%. Of the 163 advanced degrees identified for the sample, sixty-nine different advanced degree designators were represented (42%). The largest numbers of respondents were housed in five departments: biology,

chemistry, English, psychology and speech communication.

Looking at demographic characteristics of the sample, about 40% of the GTAs in the sample had college-level teaching experience prior to enrolling in their present graduate program, suggesting that this number had taught in a Master's program elsewhere. This assumption was further substantiated by the fact that 75% indicated that they had taught for two years or less prior to entering their present program, suggesting a 2-year Master's program prior to beginning a doctoral degree. Seventy percent indicated having had no other teaching experience; the other 30% indicated having had a year or more of high school teaching experience prior to beginning their graduate work.

About half of the sample was comprised of Master's students (47.8%) and the other half of doctoral students (46.5%). Two people were nondegree, two were enrolled in a doctoral program in another department, three were enrolled in a Master's program in another department, and five were pursuing other advanced degrees.

The Incoming GTA Sample

A similar sample was created of GTAs who had not yet begun their teaching experience and who had not yet experienced any sort of GTA training. Again, two questionnaires were mailed to each of the department chairs/heads included in the chairs/heads sample described elsewhere. This time, chairs/heads were asked to pass the questionnaires along arbitrarily to two individuals who had been offered an assistantship for the upcoming year but who had not actually begun the GTA program. Questionnaires were mailed during the summer of 1987 to allow chairs/heads ample time to select respondents.

Again, it is difficult to compute the percentage of usable responses, given the ambiguity of how many new GTAs were actually admitted into the graduate programs in the sample. In all, 322 usable questionnaires were returned from the 678 distributed, for a response rate of at least 47%.

The largest numbers of new GTAs were from departments selected to provide depth for the sample: biology, chemistry, English, mathematics, psychology and speech communication. Of the 163 possible degree categories identified for sample selection, 70 (42.9%) different advanced degrees were represented in the final sample. Completed questionnaires were received from 140 different schools.

Results and Discussion

The Returning GTA Study

Variables in the returning GTA questionnaire assessed GTA perceptions and characteristics in seven areas: 1) demographic characteristics and teaching responsibilities, 2) training experiences, 3) evaluations of training experiences, 4) supervision or ongoing/follow-up training activities and

evaluations of those follow-up activities, 5) perceptions of their teaching ability and the degree to which training affected that ability, 6) perceived needs as GTAs and the importance of various activities for meeting those needs, and 7) overall satisfaction with their graduate teaching assistantships.

Demographic characteristics and teaching responsibilities.

A large majority of the respondents (87%) indicated teaching sophomore- or freshman-level courses. Only about 7% taught junior-level courses and another 4% taught senior-level courses. The remaining 2% team-taught graduate-level courses. About half of the courses (47.3%) involved were service courses taken by people outside of the GTAs' departments; one-fourth (22.7%) were courses taken primarily by majors/minors in the department. The remaining courses were comprised broadly of "other" categories such as "a course required by everyone in the university" (17.4%) or "elective courses which appear on some but not all programs in the university" (3.4%).

Teaching assignments varied, but the largest number (38.1%) of GTAs in the sample indicated teaching two courses per quarter or semester. Just over one-fourth (27.2%) taught one course per term and about 20% (19.3%) indicated that they taught three or more sections per term. The remaining GTAs could not quantify their loads because their responsibilities included grading, group facilitation, and other activities for as many as 6 different sections of a course. Sixty-seven percent of the returning GTAs had taught more than one course in their departments, 38% had taught at least three courses, and 17% had taught four or more courses in their departments. Over two-thirds (67.6%) of the GTAs were the sole classroom instructors for their courses, teaching either self-contained sections in which they made all syllabus decisions (34.3%) or self-contained sections governed by a common textbook, syllabus and directed by a faculty member/basic course director (33.3%). About 15% taught lab sections for mass lecture courses. The remaining GTAs team-taught with faculty or served as graders or facilitators.

Training experiences. Just over half (53.1%) of the GTAs in the returning sample indicated having received some form of GTA training (n = 171). Of those who had been trained, the largest number (13%) reported a training program consisting of one week of instruction prior to the beginning of classes. Over three-fourths indicated that their training programs had lasted for one week or less. Only three individuals indicated having taken a training course prior to teaching and only one team-taught with a faculty member prior to entering his or her own classroom.

Evaluation of training experiences. Using a 9-point scale (1= not at all satisfied; 9 = completely satisfied), GTAs who had been trained prior to their entering the classroom were asked to rate their satisfaction with

their teacher training along seven dimensions: length and time frame, level at which material was presented, time provided for practice, time provided for absorption of material, interaction among GTAs during the session, materials provided, and topics covered. Results were mixed, with some variables receiving mildly positive ratings and others being rated somewhat negatively. The mean evaluation for length and time frame was 6.2, with 73% of the respondents rating this variable at "5" or higher. About 4% indicated that they felt the training session was too long and 14% indicated that it was too short. GTAs were somewhat dissatisfied with the level at which the material was presented, providing that variable with a mean rating of only 4.6. Twenty-five percent of the GTAs felt that the coverage was at too low a level; fewer than one percent felt that it was too high. The amount of time provided for practicing skills received a similarly unfavorable response with a mean rating of 4.8. Twenty-one percent of the respondents would have preferred to have spent more time; two percent felt that too much time was provided. With regard to time provided to absorb the material, the response led to a mildly favorable mean of 5.8. Fourteen percent would have preferred to have had more time; two percent needed less. Materials provided received a mean satisfaction rating of 6.8, indicating a favorable response, and topics covered were rated at a positive 6.5.

Table 1 presents means for GTA evaluations of 27 content areas that may have been covered in their GTA training sessions. For each content area covered in their particular training, returning GTAs were asked to rate how valuable that area was to their teaching training, using a scale from 1 (not at all valuable) to 9 (extremely valuable). Respondents were asked to skip any content areas not actually covered in their training, allowing for comparisons among areas in terms of percentages of GTAs actually exposed to that material.

Overall, only three content areas, using educational films/filmstrips, coaching, and using videotapes of popular movies, received mean evaluations below the midpoint of the scale. Coincidentally, these three areas were among the four content areas used with the lowest frequency, suggesting that the individuals in charge of the training recognized the limited value of these content areas for GTA training. Similarly, the highest-rated areas were among the most-used content areas, suggesting a similar congruence of perceptions.

GTAs also were provided with a list of six possible activities/learning experiences that may have been used in their training programs and were asked to rate the value of each, using the same 9-point scale. Most items on the list received very low frequencies of response, suggesting limited usage. The first item, microteaching sessions, was reported as having been experienced by only 15 GTAs in the sample (9%). Most interesting was the distribution of evaluations: six people rated the experience as "not at all

valuable" and the remaining 11 rated microteaching as "extremely valuable." There were no values between the two extremes, suggesting that microteaching was perceived either as a wonderful experience or a total waste of time. The mean value for this variable was 5.6, just above the midpoint of the scale. The second item, practice grading sessions, received a much wider range of responses. Of the 50 GTAs (29%) who reported having participated in this activity, only 22% rated it below the midpoint of the scale, suggesting that most GTAs felt that this was a worthwhile aspect of their training. A full 30% rated practice grading sessions at a perfect "9" on the scale, for a mean value of 6.4. The third item on the list was the use of group team-building activities. Only 16 GTAs reported having experienced this strategy (9%). The range for this variable was from 1 to 9, with most people rating the experience as valuable. The mean value was 7.0. Fourth on the list was the use of experiential activities such as simulations, roleplay situations, and related activities. Thirty-two GTAs had experienced this type of teaching strategy in their training (19%). Again, the range included all values of the variable, but the mean value was on the positive side at 6.3. Forty-five GTAs indicated that faculty or other supervisors had critiqued their presentations, microteaching sessions or inclass teaching ability. Over half rated this experience as an "8" or "9" on the 9-point scale, suggesting very high value for this technique. The overall mean value for the variable was 6.3. Finally, GTAs who had had the experience of having had their work critiqued (e.g., lesson plans, lists of course objectives, etc.) were asked to evaluate the value of that experience. Thirty-seven GTAs indicated having been critiqued in this way (22%). The mean for this experience was positive at 6.6.

To assess perceptions about their training, GTAs who had experienced some form of training program were asked to assess their satisfaction with the quality of their training programs (1 = not at all satisfied; 9 = completely satisfied) and to assess the degree to which the training was beneficial to their classroom effectiveness and to the GTA group's teaching as a whole (1 = not at all beneficial; 9 = completely beneficial).
In general, GTAs were slightly satisfied with their training, rating their overall satisfaction at 5.9. Thirty percent rated their training as being below 5 on the scale and 59% rated their training as being above 5. When asked to assess the degree to which training benefited themselves and their colleagues, GTAs tended to see training as being somewhat more important for other GTAs ($\bar{X}$ = 5.8) than for themselves ($\bar{X}$ = 5.4). None of the evaluations could be seen as a strong endorsement for training received, although the range of responses and the standard deviations for all three variables tended to be large, suggesting considerable diversity of opinions.

Supervisory and ongoing/follow-up activities. To provide a description of supervisory and ongoing or follow-up activities, GTAs were

asked whether or not they were involved in some form of ongoing training program. Thirty-six percent of the respondents indicated that they were (n = 118). Tables 2 and 3 present lists of activities and content areas associated with those ongoing teaching training programs and the degree to which each was utilized. Each variable listed also was evaluated by participating GTAs using the 9-point value scale (1 = not at all valuable; 9 = extremely valuable).

From the data in Table 2, it would appear that all activities reported as being used in these follow-up programs were evaluated positively, with only one, retreats, receiving both a low frequency of evaluations and a relatively low mean score. The method of follow-up most often used was some form of inclass observation of GTA teaching, whether handled by a basic course director/supervisor or some other faculty observer. Weekly staff meetings and required observations of other instructors were also activities included in half of the programs surveyed.

The ordering and evaluations for the 27 content areas presented in Table 3 for follow-up programs closely parallel those for the GTA training sessions presented in Table 1. Although the order is shifted slightly, the same three content areas appear at the top of both lists: course policies/procedures, providing constructive criticism, and grading. The same three are also on the bottom of each list: using educational films/videotapes, using videotapes of popular movies, and coaching. Apparently, whether encountered prior to teaching or during the teaching experience, some topic areas are perceived as nearly essential while others are perceived as relatively unnecessary. This time, however, the link between the evaluation an item received and its frequency of mention is less strong, possibly reflecting a difference between pre-teaching training and follow-up training. For example, fewer than 30% of the GTAs received follow-up instruction in using experiential activities and, yet, those who did receive that training rated its importance at 6.6. Perhaps the staffing and money simply are not available for broad-based follow-up training, regardless of its perceived effectiveness.

Once again, a list of possible activities/learning experiences was presented in the questionnaire for the ongoing/follow-up training programs and GTAs were asked to rate the value of each to their teaching training on the 9-point value scale. Seven items were listed: practice grading, microteaching, group team-building, experiential activities, tests over content presented during training, faculty/supervisor critiques of GTA presentations, and critiqued assignments related to teaching. Highest-rated were practice grading sessions (7.3), experiential activities (6.5), faculty/supervisor critiques (7.2) and critiqued assignments (6.8). Of the GTAs who indicated participating in some sort of follow-up training, about 40% participated in each of those activities. Lowest-rated was

microteaching at 2.8, which was reported by only 5 GTAs (8%). The remaining two items, team-building and tests, were rated at 5.4 and 5.3 and were each indicated by 20% of the GTAs surveyed.

To assess the perceived effectiveness of such ongoing or follow-up training, GTAs were asked to evaluate their satisfaction with the training, the degree to which it was beneficial to themselves, and their perceptions of its benefit to their GTA group as a whole. GTA satisfaction received a mean rating of 6.2, with personal benefits and group benefits receiving equal ratings of 5.9 each. Thus, the follow-up sessions were rated as more beneficial overall than the original training sessions.

Table 4 presents the final data set based on a subset of the sample, GTAs who had received some sort of follow-up training or supervision. These GTAs were asked to evaluate, on a 9-point scale, their satisfaction with a list of twelve supervisor characteristics or behaviors, such as the supervisor's accessibility, teaching ability and credibility in the department. Overall, GTAs expressed high satisfaction, with the lowest-evaluated item, supervisor's conflict management ability, receiving a very respectable 7.5 mean score.

Perceived teaching ability and perceived effect of training.

The final sections of the questionnaire assessed GTA perceptions of their teaching ability, the perceived effect of training on that ability, and their opinions on what should be included in GTA training. All GTAs in the sample responded to these questions, whether or not they had received prior training and whether or not they were provided with follow-up training and/or supervision.

All GTAs in the sample were asked to evaluate their department's preparation of GTAs for teaching compared to other departments in their institutions. Almost half (47.3%) described their preparation as "much better," 2% felt that their training was "somewhat better," 4% said that it was "about the same," 23% rated their training as "somewhat worse," and 6% said that it was "much worse" than training in other departments. Fourteen percent indicated that they had "no basis for comparison."

GTAs also were asked to evaluate the importance of campus-wide and department-based training for GTAs, using a 9-point (1 = not at all important; 9 = essential) scale. Opinions were widely split on the value of campus-wide training, with roughly 40% on both sides of the midpoint and the other 20% rating such training at 5.0 ($\bar{X}$ = 5.1). Such was not the case with department-based training. In spite of the fact that only half of the GTAs in this sample had actually received training, 85% rated the importance of departmental training at "6" or above, for a mean of 7.7. The mode for the variable was "9," with an impressive 50% of the GTAs in the entire sample selecting that option.

When asked to compare perceptions of their teaching ability now and

during their first terms as GTAs, respondents gave themselves a mean rating of 6.1 for their teaching abilities as they began their assignments and 7.5 at the time that the data were collected. They estimated their students' satisfaction levels at 7.4 , their department chairs/heads' satisfaction at 7.9, and their supervisors' satisfaction levels at 7.9. Overall, whether trained or not trained, then, GTAs felt that their teaching ability was close to excellent. In fact, only 4 GTAs (2%) rated themselves below the midpoint of the scale for any of those variables.

Perceived training needs and evaluation of content areas.

Tables 5 and 6 present lists of content areas and topics for discussion that might be included in GTA training programs. The entire sample (N = 207) was asked to evaluate the importance of each for teaching using the 9-point value scale.

The rank-ordering of the list in Table 5 is quite similar to those in both Tables 1 and 3, which provide similar evaluations for preteaching training and ongoing training, respectively. Again, creating interest, understanding student abilities, providing constructive criticism, and building climate and rapport were rated as highly-valued activities. Using educational films/filmstrips and using videotapes of popular movies tended to not be perceived as having much value for GTA teaching, with or without training in their use. What is interesting is the much larger range of tabled means. Evaluations of those topics made by the entire GTA sample of 207 ranged from 8.2 to 2.3. The range of evaluations of those items as components of training programs was only 7.6 to 4.0, and the range for those items as components of follow-up programs was from 7.2 to 4.4. This difference probably was produced by the larger number of GTAs who perceived "broad-based" content areas (e.g., creating interest in course content, understanding students' abilities and needs, etc.) to be important while at the same time diminishing the importance of content areas that applied to only a small subset of the disciplines represented, such as coaching or using video materials. Logically, only GTAs who would be required to handle videotape or coach students would see the value in those activities and/or be exposed to instruction in their use. Conversely, learning to create interest in course content would apply to all GTAS.

In Table 6, the data suggest a higher emphasis on the interaction-based activities, such as giving/accepting criticism, handling upset students, saying "no" to students, and establishing authority, than on the more administrative duties such as holding office hours, professionalism, and dealing with controlled substances. Once again, providing feedback and using feedback provided from others was cited as being of special importance to GTAs.

Table 7 presents 12 teaching enrichment techniques that might be included in a GTA training program, some of which overlap techniques listed

in Table 2. Again, similarities are apparent. Being observed by faculty members or other supervisors appears to have been perceived as a valuable learning tool for GTAs, as were staff meetings, workshops, the use of videotape for self-critique and the opportunity to team-teach with other faculty members. More "academic" tasks that might be associated with a training course, such as reading materials on teaching, writing analysis papers and keeping a journal, were not perceived as useful activities.

Overall satisfaction with the GTA experience. Table 8 presents eight dimensions of a GTA assistantship and evaluations of each, using the 9-point satisfaction scale (1 = not at all satisfied; 9 = completely satisfied). Only one item received a neutral evaluation: financial benefits. Apparently, GTAs in the sample were satisfied with the degree to which they understood expectations others had for their role and felt that the GTA role was defined realistically. What they did not see as satisfactory was the degree to which they were rewarded financially for their efforts.

The Incoming GTA Study

The second study examined perceptions of incoming GTAs who had had no teaching training. The questionnaire distributed to these individuals focused on three areas: 1) demographic characteristics and teaching assignments, 2) perceptions of readiness to teach, and 3) perceived value of various elements that might be used in GTA training programs.

Demographic characteristics and teaching assignments. Sixty-nine percent of the incoming GTAs included in the sample indicated having had no college-level teaching experience prior to enrolling in their current graduate program. Of the 31% who said that they had taught before, 80% indicated having taught for four years or less, with the majority (37%) indicating that they had taught for two years.

With regard to other teaching experience, 60% indicated having had no other teaching experience. Of those indicating prior experience, 63% had taught high school prior to beginning their graduate programs. Other experience cited included teaching swimming, Sunday school, drivers' training, music lessons and sports/aerobics. Several GTAs indicated having done some tutoring during college.

To eliminate those respondents with prior GTA training, new GTAs were asked whether or not they had attended "a teacher training program of any kind prior to enrolling in this graduate program." Twenty-four percent indicated that they had received such training; these individuals were dropped from some of the subsequent analyses.

New GTAs were asked whether or not they would participate in training programs of some sort prior to their teaching assignments. Forty-four percent of the GTAs indicated that they would not be trained. Of the 56% who anticipated a training program, the majority (90%) indicated that their training session would last one week or less.

For those GTAs who expected to receive training, a question on the survey assessed their perceptions about the adequacy of the amount of time allotted for training (1 = not enough time; 5 = ideal time frame; 9 = too much time). The range of responses was from 1 to 9, with the largest number of responses (38.3%) falling at the midpoint of the scale. In all, 31% indicated that their training would be on the long side and exactly the same number felt that it would be shorter than ideal.

When asked to described their role in the courses that they would be asked to teach, over half (54.0%) indicated that they would be assigned to sections in which they would be the "sole instructor." Nearly 20% (18.6%) indicated that they would be lab instructors for mass lecture/laboratory courses, 6.8% indicated that they would be a course assistant (grader, facilitator, etc.) and just over 5% indicated that they would team-teach with a faculty member. The remaining 14% described a range of responsibilities, including tutoring, running question sections, proctoring programmed or Personalized System of Instruction courses, and teaching music lessons to individual students.

One hundred, or just over 31%, of the GTAs in the sample were doctoral candidates and twice as many (63.0%) were Master's candidates in their departments. The remaining 6% were made up of Master's candidates in other departments and individuals seeking other advanced degrees.

GTA perceptions of readiness to teach. A major question underlying this research was whether or not GTAs feel prepared for their teaching responsibilities prior to beginning their graduate programs. The results of this study suggest that they do.

When asked to rate their confidence about their ability to be an effective teacher (1 = not at all confident; 9 = totally confident), 95% of the entire sample and 87% of the untrained GTAs tended to rate themselves as "5" or above. The modal value for both groups was "7" and the means were 7.0 and 6.6, respectively. Thirty-six percent of the total sample and 30% of the untrained group rated themselves as an "8" or "9" in confidence.

To examine specific areas of confidence and concern, the questionnaire listed 14 skill areas required for effective teaching typically covered in GTA training programs. New untrained GTAs were asked to assess, on a 9-point scale (1 = not at all well; 9 = extremely well), how well the thought that they would handle each of the areas. Again, the overall assessments were very positive, with literally all areas except one (using a variety of instructional materials) receiving a mean rating of about 7.0. Specific content areas, in descending order, were the following: establishing a positive classroom atmosphere (7.5); grading/critiquing assignments (7.4); overall classroom management (7.3); writing/grading exams (7.3); implementing course policies (7.2); creating lessons that will involve students actively (7.1); creating interest in course content (7.0); effectively

processing/debriefing activities (7.0); giving clear, effective lectures (6.9); writing a syllabus (6.9); developing effective lesson plans (6.9); effectively handling student/teacher conflicts (6.8); managing time effectively (6.8); and using a variety of instructional materials (5.9).

Perceived value of training elements. The same items were repeated for the next question on the survey, which asked new untrained GTAs to rate, on a 9-point scale (1 = not at all valuable; 9 = extremely valuable), the value of training in those areas to their teaching effectiveness. Again, all items received fairly high ratings, with means this time around 6.5, suggesting a fairly positive attitude toward GTA training, whether or not they expected to receive such training themselves. Specific content areas, in descending order, were the following: creating lesson plans that will involve students actively (6.9); developing effective lesson plans (6.8); giving clear, effective lectures (6.6); writing/grading exams (6.5); effectively handling student/teacher conflicts (6.4); grading/critiquing assignments (6.4); effectively processing/debriefing activities (6.3); implementing course policies (6.3); overall classroom management (6.2); managing time effectively (6.2); writing a syllabus (6.2); creating interest in course content (6.1); establishing a positive classroom environment (6.1); and using a variety of instructional techniques (6.0).

Since a variety of strategies may be used to train, support, and motivate GTAs, new untrained GTAs were asked to rate 10 possible training/support activities with regard to their impact on teaching effectiveness, using the same 9-point value scale. This time some items received relatively high ratings while at least three, retreats, journals and teaching awards, were viewed as being of relatively low value to teaching effectiveness. Items listed in descending order of perceived value were the following: regularly-scheduled staff meetings (6.4); inservice workshops/guest lectures on teaching and/or content (6.2); observations of the GTAs' teaching by others (course director, faculty, GTAs, etc.) (6.2); a graduate course on teaching (6.1); team-teaching a course (5.9); writing an analysis paper of teaching experiences (5.9); required observations of other teachers (5.8); day or weekend "retreats" to discuss teaching (4.6); keeping a journal of teaching experiences (4.5); and teaching award competitions (3.4). "Write in" choices provided by GTAs included being videotaped in the classroom, doing the assignments that their students would be asked to do, practice grading sessions critiqued by supervisors, and the availability of books or other resources on teaching.

Finally, new untrained GTAs were asked to rate from 1 to 9 the value of 13 topics that might be discussed in GTA training programs. Again, there was a fairly large gap between the highest- and lowest-rated topics. These topics, in descending order of mean ratings, were the following: balancing graduate school and teaching (7.0); giving and accepting criticism (6.7);

handling upset students (6.4); classroom ethics (6.2); appropriateness of making exceptions to rules (6.1); saying "no" to students (6.0); establishing authority (6.0); cheating (5.9); plagiarism (5.2); establishing friendships with students (5.2); responding to students who call you at home (4.9); professionalism (4.6); and controlled substances in the classroom (4.2). Other topics mentioned by GTAs included time management, establishing credibility, motivating students, asking good questions, and locating interesting examples and anecdotes to enhance lectures. Clearly, major issues pertained to managing the dual role of student/teacher and managing the authority/control dimension of the teacher role.

Summary and Implications

The research reported in this paper presents a comprehensive picture of GTA perceptions concerning their assistantship preparation/supervision. The data provide some useful findings for educators interested in developing/refining training programs for GTAs based, at least in part, on what the GTAs feel they need in order to be effective teachers.

For the returning GTAs, most of them taught freshman- and/or sophomore-level classes and two-thirds of them were the sole instructors for their courses. Over half of the new GTAs also were to be the sole instructors in their classes. This combination puts the overall GTA population in positions of authority and responsibility.

The concerns of the GTAs in handling this heavy responsibility showed in the topics/activities they wanted included in training/supervision programs. Most areas listed received high ratings, suggesting the desire by both new and returning GTAs to receive help in all areas of teaching. The areas listed that received low ratings typically centered on items less directly connected with actual teaching skills, e.g. attending retreats, keeping a journal, and having competitive teaching awards. The most valued items tended to center on specific skill development, with high regard being given to performance critiques by faculty members/supervisors.

The returning GTAs indicated that only about half of them had received any training for their assistantships. Over three-fourths of the GTAs who had been trained indicated that their training program lasted for a week or less. As for follow-up/supervisory activities, only 36% of these GTAs reported participating in these activities. The new GTAs reported similar experiences: Just over half reported that they would be trained and 90% of those who would be trained indicated a training program of one week or less would be used. This is not positive news for educators convinced of the value of training to increase the effectiveness of GTAs.

The returning GTAs also did not seem to show overwhelming satisfaction with any particular part of their training. Although the results

of reactions to specific parts of training programs were mixed, with some being slightly positive and some being slightly negative, none of the areas responded to would suggest a pattern of satisfaction with GTA training. On a 9-point scale, the area receiving the most positive evaluation of training was in the materials provided, which received a mean rating of 6.8. The same average response that was reported concerning specific parts of training programs also was reported for their overall satisfaction with their training: Returning GTAs were slightly satisfied with their training (5.9) and felt that training had a slightly above average effect on their teaching (5.4) and the teaching of other GTAs (5.8). The variability of the responses received here, however, do lead to the belief that the GTAs had diverse opinions about their training programs and their effects on teaching.

The returning GTAs did show more congruence in their perceptions of the value of departmental training programs. The mean for this response was a high 7.7, even though only half of the GTAs responding to this question had actually received any training at all. The returning GTAs were split over their perceived importance of campus-wide training programs. The new untrained GTAs reported favorable responses to the value of training, too. Their rating of the value of training in specific areas resulted in means around 6.5 for each item, despite the fact that about half knew that they would not receive training in these areas.

The strongly perceived value of training programs on the part of GTAs, coupled with the fact that about half of the GTAs were not trained at all and those who were trained did not show overwhelming satisfaction with that training, may lead to the suggestion that GTAs were unhappy with their assistantships and not satisfied with their teaching performance. However, this was not found to be true. GTAs who had taught generally were satisfied with their assistantship responsibilities. Almost half of the returning GTAs also felt that their department's preparation of GTAs to teach was much better than other departments. In addition, GTAs overall rated themselves highly as teachers: They gave themselves a rating of 6.1 as they began their teaching assignments and a high 7.5 at the time that the data were collected. The new GTAs also were confident about their teaching abilities despite their inexperience and lack of projected training: The new GTAs who expected to be trained reported a mean confidence level of 7.0 and the new GTAs who would not be trained reported a mean of 6.6.

These findings do not seem to coincide, and the reasons for this discrepancy are not clear from these data. However, four possibilities come to mind. First, it is possible that, while the GTAs felt that they would do well/are doing well in the classroom, they would rate themselves even higher given the training they said that they value. Therefore, the data would mean that the GTAs were satisfied with the status quo because of their perceived skills, even though they recognized that there was room for

improvement.

Another possible explanation for the high self-evaluations may have to do with self-esteem. In order to function in a stressful situation like college teaching, GTAs may need to downplay their weaknesses. A personal evaluation that is very low would force the GTA to think about the possibility of losing the assistantship and, therefore, the support needed to earn the advanced degree.

A third possible explanation is in the fact that the data reported concerning effectiveness in the classroom were self-perceptions of abilities rather than measurement of abilities. It is possible that the GTAs were not realistic about their abilities. Follow-up research of a comprehensive nature that gathers opinions of the effectiveness of GTA teaching from their supervisors may be a useful addition to this data collection.

Finally, the fact that GTAs rated themselves so highly as teachers may bring us back to one of the benefits to students mentioned earlier: GTAs are frequently more involved, more motivated, and more compassionate teachers than regular faculty. Perhaps the high evaluations were based, at least in part, on the GTAs' perceived ability to overcome some of the reasons for their dissatisfaction with teachers that the GTAs had encountered in their own undergraduate classrooms.

Overall, the research reported in this paper revealed many similarities between the experienced and the new GTAs. Both groups placed a high value on training and expressed a strong feeling that training would enhance their teaching effectiveness. Both groups indicated that less than half of them would receive/had received the training they valued. The returning GTAs who were trained did not show overwhelming satisfaction with the training programs they did receive. Despite this finding, the GTAs tended to rate themselves highly as teachers and felt that their supervisors and students also rated them highly.

Although these findings seem contradictory, possible explanations suggest the need for more direct evaluation of students to assess their overall effectiveness, more systematic development and evaluation of current training practices and more comprehensive research to further analyze some of the findings of this research. It seems to be in the best interests of all involved to direct resources to just such further inquiry. As noted by Jennings (1987), "we depend heavily on our TAs. We depend upon them to care about their teaching and about their studies, and to apply themselves sincerely to both efforts. We must be careful to give them this message by providing the necessary opportunities for training and assistance to make excellence in both teaching and scholarship attainable" (p. 5).

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Footnotes

[1]For a detailed description of the deans and chairs/heads questionnaires, see Buerkel-Rothfuss and Gray, "Graduate Teaching Assistant (GTA) Training: The View from the Top" also presented at this conference.

TABLE 1: Means for 27 content areas covered in GTA training and percentage of sample responding for each area (n = 171)

TOPIC AREA	MEAN	%
course policies and procedures	7.6	80%
grading course assignments	6.7	80%
providing constructive criticism	6.7	67%
writing a syllabus	6.5	56%
handling student-teacher conflicts	6.5	76%
understanding student abilities/needs	6.3	77%
providing "hands on" experience	6.2	41%
using experiential activities (simulations, etc.)	6.2	42%
campus-wide teaching requirements	6.1	35%
classroom management	6.1	67%
ways to evaluate course/teacher effectiveness	6.1	54%
using one or more textbooks	6.0	46%
lesson plan development	5.9	66%
leading class-wide discussions	5.7	51%
writing objective tests	5.6	36%
leading small group discussions	5.6	48%
creating interest in course content	5.5	68%
time management	5.4	59%
giving effective, interesting lectures	5.4	52%
building climate and rapport	5.3	67%
using overhead transparencies	5.1	27%
assigning group projects	5.1	29%
writing essay exams	5.0	36%
processing activities	5.0	23%
using educational films and filmstrips	4.7	24%
coaching	4.4	18%
using videotapes of popular movies	4.0	18%

TABLE 2: Activities used on ongoing teaching training programs and GTA evaluations of each (n = 118)

ACTIVITY	MEAN	%
course director/supervisor observations of GTAs	7.2	56%
guest lectures on teaching	7.0	32%
weekly staff meetings	6.9	48%
faculty observations of GTA teaching	6.9	58%
training course required each term	6.8	40%
inservice workshops	6.8	34%
teaching award competitions	6.8	23%
required observations of peers or other teachers	6.7	50%
day or weekend "retreats"	5.7	10%

TABLE 3: Content areas covered in ongoing training programs and GTA evaluations of those content areas (n = 118)

CONTENT AREA	MEAN	%
course policies and procedures	7.2	60%
providing constructive criticism	7.1	56%
grading course assignments	7.0	71%
understanding student abilities/needs	6.8	56%
providing "hands on" experience	6.8	35%
writing a syllabus	6.7	45%
classroom management	6.6	50%
giving effective, interesting lectures	6.6	39%
using experiential activities	6.6	29%
lesson plan development	6.5	58%
building climate and rapport	6.5	42%
creating interest in course content	6.4	52%
handling student-teacher conflicts	6.4	60%
using overhead transparencies	6.2	29%
ways to evaluate course/teacher effectiveness	6.2	45%
leading class-wide discussions	6.0	37%
using one or more textbooks	6.0	42%
writing essay exams	5.9	29%
campus-wide teaching requirements	5.9	24%
writing objective tests	5.8	32%
leading small-group discussions	5.8	39%
assigning group projects	5.6	27%
processing activities	5.5	16%
time management	5.4	35%
using educational films and filmstrips	5.3	19%
using videotapes of popular movies	4.4	17%
coaching	4.4	16%

TABLE 4: Ratings of satisfaction with various characteristics of teaching supervisors (n = 118)

CHARACTERISTIC	Mean
backing of decisions made by the GTA	8.2
rank and expertise	8.2
teaching ability	8.2
scholarly ability	8.1
accessibility	8.0
interest in/concern for GTAs	8.0
interest in/concern for GTA teaching quality	7.9
credibility in department	7.9
appropriateness as a role model for GTAs	7.8
communication skills	7.8
conflict management ability	7.5
leadership ability	7.6

TABLE 5: Perceived importance of twenty-four content areas or teaching skills/strategies (N = 207)

CONTENT AREA	MEAN
creating interest in course content	8.2
understanding student abilities/needs	8.2
providing constructive criticism	7.9
building climate and rapport	7.8
giving effective, interesting lectures	7.7
grading course assignments	7.6
lesson plan development	7.3
time management	7.2
handling student-teacher conflicts	7.2
providing "hands on" experience	7.2
classroom management	7.0
leading class-wide discussions	6.9
leading small-group discussions	5.9
using one or more textbooks	5.9
using experiential activities	5.6
writing objective tests	5.3
writing essay exams	4.7
processing group activities	4.5
assigning group projects	4.2
using overhead transparencies	3.7
coaching	3.6
using educational films and filmstrips	3.6
using videotapes of popular movies	2.9
going on field trips	2.3

TABLE 6: Perceived importance of 14 potential topics for discussion in a GTA training seminar/course/workshop (N = 207)

TOPIC	MEAN
giving and accepting criticism	7.7
balancing graduate school and teaching	7.6
course policies and procedures	7.3
handling upset student	6.9
saying "no" to students	6.9
establishing authority	6.6
cheating	6.6
establishing a calendar/due dates for course	6.6
plagiarism	6.4
handling office visitations by student	6.1
professionalism	5.4
office hours	5.3
responding to students who call at home	4.8
controlled substances in the classroom	4.0

TABLE 7: Value ratings of 12 teaching enrichment techniques (N = 207)

ENRICHMENT TECHNIQUE	MEAN
observing other faculty members	6.9
inclass observations of GTA teaching	6.6
attending regular staff meetings to discuss teaching	6.3
attending workshops conducted by people outside of the department on teaching effectiveness	6.0
videotaping of GTA teaching for self-critique and analysis	5.9
team-teaching a course with a regular faculty member before being assigned to teach	5.9
reading articles on teaching improvement techniques	5.4
team-teaching a course with another GTA	5.2
videotaping of GTA teaching for critique/analysis by others	5.1
reading textbooks on teaching effectiveness	4.8
keeping a journal of teaching experiences	4.3
writing an analysis paper based on teaching experiences	3.8

TABLE 8: GTA satisfaction with various aspects of their teaching assistantships (N = 207)

DIMENSION	MEAN
level of academic freedom	7.6
clarity of role as GTA	7.4
clarity of job responsibilities	7.3
availability of needed information	7.2
clarity of information provided	7.1
teaching load	7.0
criteria for successful job performance	6.4
financial benefits	5.1